REPORT RESUMES

ED 010 539 56

THE EFFICACY OF VIDEOTAPES AND DIRECT OBSERVATION FOR
TEACHING OBSERVATIONAL SKILLS.
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REPORT NUMBER NDEA-VIIA-1280 PUB DATE 66
REPORT NUMBER BR-5-0886
GRANT OEG-7-21-0040-243
EDRS PRICE MF-$0.27 HC-$5.60 140P.

DESCRIPTORS- *SKILL DEVELOPMENT, *PRESERVICE EDUCATION, *OBSERVATION, CLASSROOM TECHNIQUES, *METHODS RESEARCH, COLLEGE STUDENTS, *TEACHER EDUCATION, PILOT PROJECTS, TELEVISION VIEWING, COMPARATIVE ANALYSIS, HONOLULU, HAWAII

A PILOT PROJECT FOR TEACHING OBSERVATIONAL SKILLS WAS CONDUCTED, USING FOUR PLANS OF OBSERVATION--DIRECT CLASSROOM OBSERVATION ("DO") ONLY, VIDEOTAPE TELEVIEWING ("TV") ONLY, "DO" FOLLOWED BY "TV," AND "TV" FOLLOWED BY "DO." COLLEGE STUDENTS ENROLLED IN A TEACHER EDUCATION COURSE WERE RANDOMLY ASSIGNED TO COMPARISON GROUPS, USING THE DIFFERENT OBSERVATIONAL METHODS, ALL STUDENTS WERE PRETESTED ON VARIOUS MEASURES. POST-TESTS WERE ADMINISTERED ON COMPLETION OF OBSERVATIONS. OF THE COMPARATIVE MEASURES USED, THE ONLY ONE WHICH IDENTIFIED ANY SIGNIFICANT GROUP DIFFERENCES WAS THE COMPARISON OF STUDENT OBSERVER REACTIONS WITH CHILDREN'S RESPONSES TO SOCIOGRAMS. THIS COMPARISON SHOWED THAT THE SEQUENCE OF "DO" FOLLOWED BY "TV" PRODUCED MORE AGREEMENT BETWEEN THE STUDENT OBSERVERS AND THE OBSERVED CHILDREN THAN DID "TV" FOLLOWED BY "DO." STUDENT EVALUATIONS INDICATED THAT MOST STUDENTS PREFERRED THAT TYPE OF OBSERVATION AND OBSERVATIONAL SEQUENCE WHICH THEY INDIVIDUALLY EXPERIENCED. (RS)

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THE EFFICACY OF VIDEOTAPES AND DIRECT OBSERVATION FOR TEACHING OBSERVATIONAL SKILLS

Front

Research Project No. 7-21-0040-243

Esther C. Jenkins, Director

University of Hawaii
Honolulu, Hawaii

1966

The research herein was supported by a grant from the United States Office of Health, Education, and Welfare under Title VII - NDEA.

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FOREWORD

This report summarizes and presents the findings of a twelve months' pilot project related to the teaching of observational skills by means of direct observation and videotaped classroom situations. The project was made possible through a grant from the United States Department of Health, Education, and Welfare under Title VII of The National Defense Education Act of 1958 (P.L. 85-864).

This undertaking was considered to be of special significance because of the rapidly increasing need for well qualified elementary teachers in the state and a correspondingly rapid expansion in enrollment at the College of Education, University of Hawaii. Providing desirable observational experiences for prospective teachers became more and more difficult because of increasing demands placed upon the laboratory schools in the areas of demonstration and research. Also, the schools lack the necessary space for accommodating large numbers of observers.

This project is only one of a number of efforts which are currently being made to improve the program of teacher education at the University of Hawaii. It is hoped that the findings and recommendations resulting from the study will have significance for aspects of the teacher education program other than the development of skills in the observation of children.

Such work as was involved in this project could not have been carried on without the cooperation many people. For this reason, I would like to acknowledge at this time the invaluable assistance of the following:

Mrs. Lorraine Fitzsimmons, Assistant Professor of Education and instructor of one of the control groups.

Mrs. Margaret Gillespie, Assistant Professor of Education, who assisted in formulating the original proposal.

Dr. Robert Reed, Associate Professor of Education and Director, Educational Television, Hawaii--television coordinator of the project.

Dr. Don Leton, Associate Researcher of the Bureau of Educational Research, advisor in research techniques.

Dr. Jack Gordon, Assistant Researcher in Education, Bureau of Educational Research, and Mr. Peter Dunn-Rankin, Assistant Professor of Education, who assisted in the statistical analysis of the data.

Miss Hannah Lou Bennett and Mrs. Gladys Koo, principals of the Preschool and Elementary School, who made arrangements for the taping of classroom groups and who coordinated some of the routine matters connected with the project. Dr. Walter Wittich, director of Communications Center, University of Hawaii, who spurred us on with his enthusiasm.

Mrs. Doris Dyer, Mrs. Myrtle Collins, Miss Isabel Snow, Miss Hetty Fuhlhage, and Mr. Ray Smith, laboratory school teachers whose classroom groups of children were videotaped.

Dr. Marvin Greenberg, Mrs. Juanita Kenda, Dr. Deloris Curtis, and Miss Sue Hansen, specialist teachers who cooperated with the videotaping of children in the areas of music, art, and physical education.

Miss Ethel Oda, graduate assistant in Educational Psychology and Peace Corps trainee.

Mrs. Edna Lee Leib, supervising teacher of first grade in the University Preschool.

Mrs. Pearl Yamashita, supervisor of intern teachers.

Dr. Don Leton, associate researcher in the Bureau of Educational Research.

(The above four people acted as a panel for viewing the videotapes and analyzing significant behavior which could be noted by the students.)

Mrs. Frances Shimotsu, graduate assistant in Elementary Education.

Mrs. Veronica Rivera, graduate assistant in Elementary Education.

Mrs. Ruth Kiehm, graduate assistant in Elementary Education.

Mrs. Shirley Fujita, Assistant Professor of Education.

(The above four served as analysts of student responses to test tapes, student observation reports, student reactions to hypothetical disciplinary cases, and questions posed by students.)

Mr. John James, Program Director and graduate assistant in educational television; director of the technical aspects of the project; including training of cameramen, arranging the classroom for videotaping, and directing the actual taping sessions.

Mrs. Virginia Kemble, graduate assistant and Psychologist, who handled the testing of both children and college students, assisted in planning program, and helped in the analysis and comparison of college students' and children's responses to the sociograms.

And to my colleagues in the College of Education for their encouragement and assistance in a variety of ways.

March 1966

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Chapter 1

INTRODUCTION TO THE PROBLEM

The perceptual view of learning is the undergirding theory of this project. What has been one of our major concerns in the professional laboratory phases of our teacher education program at the University of Hawaii is expressed quite adequately by Combs:

> "Whether an individual will be an effective teacher depends upon the nature of his private world of perceptions. It follows that the perceptual world must be a matter of vital concern to teacher-education programs."[1]

Combs also reasons that teaching is a human relationship and stresses the need for teachers to develop a point of view to which they are committed and

> "a personal psychology which the good teacher needs, derived from accurate observations and given consistent meaning by personal exploration and discovery. A prime function of the teacher-preparation program must be to assist its students in the development of such a frame of reference for their future behavior."[2]

Experiences throughout our teacher education program are planned with the hope that future teachers will develop and organize perceptions about (1) their various teaching roles, (2) the people with whom they will work, and (3) the content and methods they will develop through teaching. However, the introductory course in elementary education is mainly geared towards the development of accurate perceptions about children though, obviously, perceptions about teaching techniques, school and community relationships, etc. will also be a natural outcome of any experience in which students engage.

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[1] Combs, Arthur W., The Professional Education of Teachers, a Perceptual View of Teacher Education. Boston: Allyn and Bacon, Inc., 1965. p. 19.

[2] *Ibid*., p. 21.

Introductory Course in Professional Sequence

Education 220, Introduction to Elementary Education, is a course which was moved downward from the Junior to the Sophomore year in 1960 because of the belief that professional growth takes place slowly and sequentially. The focus of the course is primarily upon the development of basic understandings in the study of self and of the child as a learner. Major topics dealt with include:

I. A Review of the Growth Process and Growth Characteristics of Preschool and Elementary School Children
II. Cultural Factors Affecting Growth and Development
III. The Role of Basic Needs in Human Development
IV. Developmental Tasks
V. How Learning Takes Place as the Child Matures
VI. The Exceptional Child in the Classroom
VII. Discipline
VIII. How the School Socializes the Child
IX. The Teacher's Personality
X. Specific Child Study Techniques
XI. Evaluating and Reporting Children's Progress
XII. Working with Parents

Recurrent themes appearing throughout the course include:

1. Behavior is caused.
2. Behavior can be studied.
3. Optimum learning is based upon the physical, social, and emotional well-being of the child.

4. Learning is affected by the psychological and physical environment of the school.
5. The teacher is concerned with the total growth of the child.
6. Discipline problems stem largely from factors outside the child's control.
7. Basic to an understanding of a child is the teacher's understanding of himself.
8. The values a child learns from his culture and those of the school are often in conflict.

Direct observation has long been considered an essential part of this course for the following reasons:

1. It helps to bring the student's professional goal into closer relationship with the general requirement of his college program.
2. It is a successful means of obtaining maximum involvement of those enrolled in the class in the learning experiences planned for the course.
3. It is a concrete way of supporting and reinforcing what the students are learning from lectures, discussions, and readings.
4. It is a promising method for helping students to discover many things for themselves, i.e., principles of growth and development, principles of learning, and teaching strategies.

More specifically, observation experiences are provided for the purpose of helping students to:

1. grow in their understanding and appreciation of the uniqueness of each child.
2. become sensitive to specific behavior cues which give insight into a child's stage of development or his attitudes and feelings about himself, others, and/or the learning situation.

3. become aware of consistency and inconsistency in behavior.
4. become alert to signs of deviant behavior.
5. become aware of how, why, and in what situations individuals change their patterns of behavior.
6. become sensitive to the patterns and values of peer culture and to those factors which influence a child's acceptance or rejection by the group.
7. identify areas in which children are making a thrust for independence, i.e., to become sensitized to "teachable moments."
8. assess the appropriateness of the school environment and the learning task to the child's level of development.
9. identify the elements of the teaching-learning situation which make it democratic, laissez-faire, or autocratic and the effect these have upon child behavior.
10. develop sensitivity to the specific skills needed for successful achievement of a learning task.
11. become sensitized to the many concomitant learnings taking place in a specific situation.
12. learn something of the basis upon which one determines both long range and specific objectives for individuals and the group.
13. develop a broader concept of the variety of responsibilities a teacher assumes in conducting an educational program for a group of children.
14. grow in self-understanding and awareness of one's own personal biases and prejudices.
15. decide whether or not one wants to continue with teaching as a career and, if so, at what level.

To accomplish these goals the instructors have attempted in the past to provide several observations at each of three levels, Preschool, Primary, and Upper Elementary. With the hope of making this experience even more meaningful part of the required observation time has been customarily set aside for follow-up conferences with the teachers of the classes being observed.

Students have been generally prepared in advance for observation experiences by means of films, observational guide sheets, introductory talks by the principals and excursions through the schools. Their growth in observational acuity, their ability to apply principles of development to problem situations, and their progress in making generalizations about children's behavior have been assessed in the past by means of class discussions, examinations, ability to collect significant anecdotal material about children, and term papers.

The Problem

In spite of efforts to make the direct observation experience as meaningful as possible there have been numerous problems, conflicts of interest, and changing patterns in the College of Education and the University which have made this very difficulty to achieve. In recent years the student population at the College has grown in direct proportion to the "bursting at the seams" growth of the University. For example, in comparison to thirty student teachers in 1948 there are now approximately one hundred-fifty placed in elementary classrooms each semester. This growth in numbers has created many scheduling problems difficult to resolve. Add to this the fact that it is impossible for course instructors to see everything that the students are seeing, the difficulty in discussing something of common interest to all class members becomes obvious.

There is also the element of difference in the quality of observation to be considered. Regardless of the fact that these initial laboratory experiences have taken place in the campus schools it was generally agreed that they would be superior for some students and perhaps only average for others.

Until recent years the major function of the campus schools in relation to teacher education was to provide supervised student teaching for prospective elementary teachers. With student teachers taking over part of the classroom responsibilities it was possible for the regular teachers to confer with the observation students and to answer questions or to clarify misconceptions about what they had seen. Now that these schools have become research and demonstration centers it is no longer possible for conferences to be scheduled. As a result, students leave the classroom without having had a complete experience.

Additional factors which have detracted from the quality of observation include limited space available for observers, lack of freedom to follow children into rooms where special experiences in art, music, and physical education are conducted, and, very often, viewing children from the backs of their heads only. Children are protected from observers by rules that do not permit the observers to move around the classroom or to examine their work at close range. This is understandable because of the limited space but does keep the observer from becoming aware of facial expressions and other nuances of child behavior which give clues to attitudes towards and responses to a particular situation.

Another problem stems from the fact that students must sign up for observation at whatever time their schedules permit. As a result, some observers have a limited opportunity to see children in a variety of situations. Several, for example, were scheduled only at a time when children worked independently on SRA reading materials. Without being able to see the children's faces or to hear any of their reactions the total gain from the experience seemed minimal.

Purposes of the Study

This study was undertaken in order to test the potential use of videotaped classroom situations for the purpose of developing observational skills. It seems reasonable to expect that, under controlled conditions, students' perceptions of child behavior can be brought much more sharply into focus than is possible where there is no control over what the observer may see. It also seems reasonable to expect that the sequence in which students experience both videotaped and direct observation will influence their perceptions of child behavior. Specifically, this study attempted to:

1. determine what qualitative differences exist under three plans of observation of child behavior in elementary school groups; direct classroom observation, videotape televiewing, or a combination of direct observation and videotapes.
2. attempt to determine to what extent guided observation via videotape may sharpen the students' observational skills in identifying significant child behavior.
3. attempt to determine to what extent certain aspects of child behavior, i.e., non-verbal communication, the child's perception of himself, and interpersonal relationships, may be observed through the use of the medium of television.
4. attempt to determine to what extent common experiences in guided observation through the medium of television prior to direct observation in the classroom may affect the quality of the latter experience.

In relation to the above purposes such questions as the following were posed:

1. Is it possible for students to observe on tape the same kinds of significant behavior, learning principles in operation, psychological and environmental conditions, and teaching strategies as can be directly observed in the classroom?
2. Will there be any differences in the amount of such behavior that can be observed?
3. Will there be any differences in student attitudes reflected in the two types of observation?
4. Will there be differences between observer responses to tests in course content and to test tapes? If so, will these differences relate to a particular sequence or method of observation, i.e., will the differences be due to whether or not the students observed first by videotape or direct observation, or will they be due to the fact that they observed entirely by videotape or the direct classroom method?
5. Will there be areas of common concern to all students regardless of the method of observation experienced or will each group develop different kinds of concern, i.e., discipline, creativity, etc.?
6. Is it possible for students to gain insight into children's personalities and learning needs by means of videotape?
7. Will one type or sequence of observation produce any significant differences in student reactions to discipline problems?

Experimental Hypotheses

The following hypotheses were tested in this study:

1. The guided viewing of selected classroom behavior recorded on videotapes will provide a common observational experience for all students in a given experimental group. This communality will

improve the effectiveness of instruction and increase the observational acuity of the students.

2. A combination of large-screen viewing of selected classroom behavior and direct classroom observations will be superior to the current methods of direct classroom observations.
3. The televiewing of videotapes prior to direct classroom observations will be superior to the televiewing of videotapes subsequent to classroom observations in developing observational skills.

Importance of the Study

As stated earlier professional laboratory experiences, in which the introductory observational experiences play a vital role, are generally considered absolutely essential for helping the prospective teacher to integrate theory with practice. However, the mere fact that such experiences are provided is no guarantee that the quality will be superior enough to bring about this desired integration. In its zeal for providing contacts with children an institution may fall into the trap of equating quantity with quality. Therefore, before any method is adopted as a means of giving prospective teachers experiences in observing children, it should be either evaluated against an established set of criteria or it should be put to an empirical test. In addition, when a method or methods are finally selected, students should be specifically guided in their observations so that they learn not only what to look for in a particular situation but how to spread this observation over a variety of situations and activities. Developing such skills of observation is one of the chief prerequisites to the understanding of child behavior. Stratemeyer stresses the necessity for careful selection and guidance of observation experience as follows:

> "Direct experiences must be thought about to be truly educative; to be useful in subsequent experiences. This points to the fact that direct experience in and of itself is not enough. While extending the nature and number of direct experiences in the professional program for teachers, attention must also be given to the quality of the experiences provided. Quality of experience resides both in the nature of the experience itself and in the way in which it is guided. To be assured that the young college student is adequately reflecting upon his experience, is seeing relationships, is drawing sound generalizations, experiences must be both carefully selected and adequately guided."[3]

It is this emphasis upon the need for careful selection and guidance of observation experiences which underscore the importance of this study's attempt to find ways of improving the quality of such experiences for students at the University of Hawaii.

Definition of Terms

1. Direct Observation. Observation within a specific classroom or school. (Referred to as DO-DO in Chapter IV)
2. Videotaped Observation. Observation of children who have been filmed on videotape. Playbacks of these tapes are channeled to a multi-purpose auditorium. (Referred to as DO-VT in Chapter IV)
3. Direct-videotape Observation. A sequence of observation experiences beginning with observation in a specific classroom and ending with observation of the same classroom by means of videotape. (Referred to as VT-VT in Chapter IV)
4. Videotaped-direct Observation. A sequence of observation experiences of a specific classroom by means of videotape first and direct classroom observation second. (Referred to as VT-DO in Chapter IV)

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[3] Stratemeyer, Florence, "The Expanding Role of Direct Experience in Professional Education," Off-Campus Student Teaching. 30th Yearbook of the Association of Student Teaching, State Teachers College, Lock Haven, Pa., 1951, p. 14.

5. Pre-test Tapes. Four half-hour tapes of a second grade group of children used to pre-test students' ability to note specific behavioral cues.
6. Post-test Tapes. Four half-hour tapes of a sixth grade group of children used to test growth in ability to note specific behavioral cues.
7. Teaching Tapes. Eight one-hour tapes of the fifth grade class which was used for both direct and videotaped observation.
8. Sociogram. An informal questionnaire--a device used to assess interrelationships within the class.
9. Personality Profile. A profile sheet used to test observers' ability to judge the way children saw themselves on a standardized personality test.
10. Aneceotal Record. A series of observations of a child's or a group's behavior taken over a period of time and describing significant behavior in a variety of situations.
11. Observation Report Form. A 13-page booklet used to record specific behavioral cues in the areas of physical, social, emotional, and intellectual behavior of children. Space is also provided for analysis of learning skills needed for the activity observed, for summarizing concomitant learnings taking place, and for drawing inferences for future teaching.

12. Semantic Differential.[4]

> "An instrument developed to study the ways in which the semantic processes varied within and between individuals. The subject judges a particular concept against a set of scales representing the evaluative, potency, and activity aspects of meaning. Several sets of bipolar terms represent a single dimension and the judgments on these are arranged. This procedure constitutes an operational definition of the meaning of that concept, for the individual, at that time. In this manner, changes in the meaning of a concept over a period of time, the subtle differences between two or more concepts, and the individual differences in the meaning of a single concept may be quantitatively represented." (See Appendix E)

13. IPAT. Children's Personality Questionnaire. Both an individual and a group test designed to measure fourteen variables related to general outlook and to social, emotional, and intellectual behavior.

Limitations of the Study

Four serious limitations affect the results of this study. First, because of the time factor it was impossible to develop a third series of test tapes for a final comparison of the groups at the close of the semester. Second, the pre- and post-testing of all groups should probably be related to their method of observation. In other words, instead of testing all groups by means of short videotapes it might be more valid to devise a test situation based upon direct observation for those assigned to this method of studying children. Third, the Child Development Tests were developed under the pressure of time and need considerable refinement and, fourth, more refined methods for analyzing observation reports and other reports such as anecdotal records need to be developed.

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[4] Springel, Nona F., "The Semantic Differential and Its Use," A Paper Submitted to the Graduate Faculty of the University of Hawaii in Partial Fulfillment of the Requirements for the Degree, Master of Education in Educational Psychology. University of Hawaii, Honolulu, Hawaii: 1964. p. 16.

Chapter II

RELATED RESEARCH

Numerous studies have been undertaken to assess the educational uses of television but few can be found which report the use of videotaped groups of children for the purpose of teaching observational skills.

The University of Akron reports[5] the utilization of closed-circuit television in the Guidance Laboratory for the purpose of providing their trainees with opportunities to observe non-verbal nuances in the behavior of counseling participants and to hear their dialogue at the same time. Two major features which have some implications for the type of investigation carried out in this study are the (1) group critique period immediately following the viewing and (2) the attempt to improve observation skills through the use of check lists in a fairly controlled situation.

A study conducted in 1960-61 at the University of Oklahoma[6] used two groups of students randomly selected from each of three professional courses: Social Foundations, Human Growth and Development, and Evaluation and Guidance. For each course one group was selected to observe directly in a classroom setting which the other group was provided with observation by means of films and slides. Students who saw films and slides showed somewhat better achievement, as measured by a common examination, than did those who observed the actual classroom situations. Though films, rather than videotape recordings, were used in this study, its importance to the investigation herein reported lies in the implication that "it appears to be feasible to produce single independent film sequences giving fuller treatment of separate concepts and emphasizing specific conceptual principles related to the outcomes expected from such observation assignment."[7]

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[5] Doverspike, James, "Utilization of Closed Circuit Television in the Guidance Laboratory," University of Akron, Akron, Ohio. New Media in Higher Education, Association for Higher Education, NEA. Washington, D.C.: 1963. pp. 50-57.

[6] Fulton, W. R., "Observation of Teaching: Direct vs. Vicarious Experience," University of Oklahoma, Norman, New Media in Higher Education, Association for Higher Education, NEA. Washington, D.C.: 1963. pp. 78-79.

At the University of Kansas[8] School of Medicine, medical educators have found that television, along with films can make visually accessible to large groups of medical students part of the human anatomy which could formerly be observed by only one person at a time. This ability of the camera to move in for a close-up of a subject is a feature which was capitalized upon in this investigator's study, especially in an attempt to make student observers aware of non-verbal behavior which seemed to reveal a child's responses to a particular situation.

Research at Pennsylvania[9] State University probed the comparative efficiency of large screen television projection reception as compared to small 24" or 27" individual monitor reception. Students of the College of Education and the College of Home Economics reacted more favorably to the large screen television. Percentages of preferences for each college were 64% and 77% in favor of the large screen viewing. Learning achievement, as measured at intervals on tests for each of the courses, Economics and

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[7] Ibid., p. 79.

[8] Ruke, D. S., "Medical Education and Television 1960--A Perspective on Advances in the United States," Research Film. 4:13-24; No. 1, 1960.

[9] Carpenter, C. R., "A Commentary on Television Research, 1948-1960," Newer Educational Media. University Park: Pennsylvania State University, 1961. 104 pp.

Zoology, proved to be comparable under both conditions.

An experiment more closely related to this study was carried on at San Jose State College[10] over a period of five semesters from 1959-1962. Five groups of education students were "selected by accident of registration" to participate in the project. Three of the groups were designated as experimental and the remaining two as control groups. Observation situations varied from 25% to 75% use of closed-circuit television observation as a substitute for the usual direct classroom observations for the experimental groups. Comparisons of these groups with the control groups which carried on their observations through usual direct visitation indicated that televiewing observations, with limited amounts of in-person observation, were as effective as 100% in-person observations. This was found to be true in all groups; whether 25%, 50%, or 75% of the scheduled observations were through closed circuit television.

A comparison of methods of observations in pre-service teacher education has been carried on at Hunter College.[11] The study tested the hypothesis that different techniques of classroom observation would result in different degrees of learning. The three techniques compared were: (1) classroom observation via kinescope recording; (2) closed-circuit television observations; and, (3) direct observation in the classroom. Statistical comparison of the results gained through these three media failed to show any significant superiority for anyone of the methods.

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[10] Rogers, William R. (and staffs of Division of Education and Audio-Visual Services), "Television Utilization in the Observation Program for Teacher Education." (1959-1962) San Jose State College, U.S.O.E. N.D.E.A. (Title VII) Grant, 1961.

[11] Stoller, Nathan and Lesses, Gerald S., "The Use of Television for Improving Teacher Training and for Improving Measures of Student-Teaching Performance, Phase II. A Comparison of Methods of Observation in Pre-Service Teacher Training." Hunter College of the City University of New York, New York, N.Y. 1963.

Incidental results and experiences showed encouraging possibilities however, provided that: (1) further technical adaptations of the medium could be made which would show greater fidelity of sight and sound, camera flexibility and a minimum of distraction of subjects; (2) greater use could be made of student-teacher recordings as bases for supervisory procedures; and, (3) further research and efficiency could be accomplished in the nature and measurement of teacher learning behavior. The implication here is that the communication channel itself may have been detrimental to the achievement of anticipated results.

The most recently reported research[12] on the uses of television in teacher education relates to the experimental work being carried on at Stanford University. This project has two major aspects, the first of which involves the videotaping of various age groups in a variety of subject areas. Basic equipment for this phase of the work includes a portable videotape recorder, cameras, and audio gear mounted on a cart, which can all be installed in a classroom within the three-minute interval it takes for students to move from one class to another. A wide range of classroom situations can be recorded in more than fifty cooperating schools within a one-hundred mile radius of the university. Tapes are edited and used by professors in their college classes for discussion and analysis of the teaching techniques employed.

The second phase of the project is a part of the new design of teacher education for graduate students and is known as the "Micro-Teaching Study." This is an intermediate step between course work and intern teaching in which the student is videotaped while teaching a selected lesson to a group of about five students paid to participate in the experiment. The lesson lasts from about fifteen to twenty minutes after which the "subjects" evaluate the teaching and the tapes are re-run for the student to personally evaluate his own teaching and again to go over it with his supervisor. He then re-teaches the same lesson to another small group of students in order to improve over his first attempt. When he eventually begins his intern teaching videotape recordings are again made of his performance in a variety of teaching situations.

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[12] Donner, Stanley T., "Television in Teacher Training," CETO NEWS, No. 6, Centre for Educational Television Overseas, The Studio, Nuffield Lodge, Regent's Park, London, N.W., England: March, 1965. pp. 5-8.

The findings of this study have shown a high correlation between success in micro-teaching and successful performance in a full-sized classroom. The research also suggests that videotapes of student teachers in action constitute a "reliable, objective, complete, and immediate picture of the actual teaching situation"[13] for the college supervisor whose responsibility is to guide the student's progress towards the development of good teaching strategies. As a result the college professor's time is used more efficiently and more effectively.

While this study is mainly geared towards the analysis of teaching techniques, it does suggest that a similar method might be employed for the observation and analysis of child behavior.

In summary, the research which has been conducted thus far in the area of videotape observation suggests that this method of guiding the observation experiences of prospective teachers has considerable potential. It seems to justify further study of the contribution which videotapes can make to the education of teachers.

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[13] *Ibid.*, p. 8.

Chapter III

METHOD

Equipment and Facilities

In January, 1964, the College of Education, University of Hawaii, completed the installation of a closed-circuit television facility. This installation was the result of comprehensive studies of mainland CCTV articles completed by members of the staff.

The installation was begun in the summer of 1962 when a CCTV grid was installed on the University campus, linking seven major buildings within the College of Education and enabling television origination and reception from within one hundred-fifty feet of any terminal outlet in the building. A second link was installed in 1963 which connects the College campus with the large multimedia auditorium of the new Communications Center at the University where a large screen television projector has been installed. A television studio and accompanying control room are located in the College of Education's Multipurpose building where over $150,000 of broadcast quality television studio equipment is installed. This equipment includes complete studio facilities with 4½" two-image orthicon cameras, a videotape recorder and playback machine, a multi-plexer, and complete control room facilities. The entire system is designed for maximum utilization as a CCTV system and ETV broadcasting facility.

During the taping of the second, fifth, and sixth grade classes two cameras were used in all but two instances when mechanical failure could not be immediately corrected. This made it possible to either quickly pick up a panoramic view of the entire class responding to a particular situation or to focus on an individual as they reacted to a question or comment. It also made it possible for the cameramen to prepare themselves to focus from time to time on the seven children selected for study without making this obvious to the children.

To pick up individual responses both the overhead boom and small table microphones were used. The teacher of each class wore a lavalier microphone, which was later replaced with a small wireless microphone and which considerably simplified things for him.

Advance Planning and Preparation

This project, which was originally scheduled to begin in June, 1964, was delayed because of lack of University funds to pay the salaries of a crew of cameramen. The Communications Center, including the Department of Educational Television, was in its infancy and, as yet, had limited funds at its disposal. No request for payment of crew members had been included in the original proposal because of the $10,000 ceiling on the type of grant requested. As a result, plans for a summer pilot project had to be abandoned. The actual taping of classes could not get underway until early November because of the fact that the campus schools do not open until the University officially begins its fall schedule. Teachers in the laboratory schools, also, wanted a month in which to get their classes underway before introducing the idea of videotaping to the children.

Since the University's regular equipment does not as yet include portable units taping was confined to laboratory school classes. Fortunately, three teachers, each at a different grade level, were willing to participate in the study.

Developing Pre and Post-Test and Teaching Tapes

In taping, the main purpose was to duplicate as much as possible a natural classroom situation, however, with one exception. A decision was made to tape more footage than was needed in order to eliminate the less significant situations and to make every moment of viewing of value to the observer. It was also important to tape a variety of classroom situations in order to eliminate one of the weaknesses of direct observation, that of seeing the same thing over and over. Accordingly, advance planning with the teachers was undertaken mainly for the purpose of looking ahead to the kinds of activities which would be emerging as a natural part of their programs and which held the promise of meeting the criteria established for taping. These were:

The activity taped must

1. be part of an ongoing program in the class.
2. offer a different view of child behavior from any previously taped.
3. be one which promises some type of response from the majority of the children.
4. not be a teacher lecture or demonstration.

When a teacher decided that an activity was worth taping the investigator was notified and a conference was arranged between teacher, investigator, and program director. At this time, we were given enough background about the forthcoming experience to anticipate some of the things that might happen. This facilitated the work of the program director in instructing the comeramen from the T.V. control room. No effort was made to open each tape with a formal introduction, again because we wanted to avoid everything we could that would make the situation unnatural.

As would be expected, the children in all three classes became excited over the experience of being taped. Accordingly, time was set aside to show them the initial tapes and to demonstrate the use of the cameras and other equipment. This proved most advantageous in helping them to adjust to the weekly and sometimes more frequent intrusion into their classroom.

Following this the tapes were erased and the work of developing the videotapes to be used with the college classes during the spring semester was begun. The children became quite accustomed to the presence of the cameras and only a few showed by their behavior in subsequent tapes that they were still aware of the cameramen and their equipment.

Since one of our major purposes in providing observation experiences for sophomores is to sensitize them to specific behavioral cues in the areas of physical, social, emotional, and intellectual development, we set out to develop both test and teaching tapes which would focus on these four areas. Four one-half hour Pre-Test Tapes were made of a second grade group and included music, physical education, storytime, an unstructured art and work period, and a more formal modern mathematics lesson.

Four one-half hour Post-Test Tapes were also made of a sixth grade class and included somewhat more structured lessons in Art, Music, Social Studies, and Literature.

Eight one-hour teaching tapes were then made of the fifth grade class which was to be the subject for both direct and videotaped observation. Since those students observing directly would be spending two hours in the classroom we were attempting to match this time in videotaped observation and yet take advantage of the special features of videotape, namely, the opportunity to stop a tape and discuss a point or to re-run a part of or the entire experience, while staying within the two-hour limit. These teaching tapes covered the areas of mathematics, creative writing, physical education, music, art, book reports, library activities, planning and carrying out a Christmas party, tidal wave discussion, social studies reports, and miscellaneous activities such as lunch, free play, etc. An agreement was made with all teachers to erase any tape or any part of a tape which they felt would not represent a true picture of a normal classroom situation. Fortunately, this did not become necessary.

Upon the completion of the Pre and Post-test Tapes a panel of experts including a psychologist, an instructor of the introductory course in preschool-primary education, a professor from the Bureau of Educational Research who is also a specialist in child development, and a supervising teacher of a first grade class in the campus preschool, agreed to view the tapes and to suggest what they thought students should be able to see in each in the way of significant child behavior. An outline (See Appendix A) was given to the panel members for advance study and several viewing dates were arranged. Responses of these judges were later combined and those points on which at least three of them concurred were used as a basis for analysis of observer responses to a test tape. Since each test tape was different this necessitated making a separate analysis sheet for each set of observer responses.

Fifth Grade Sociogram (Appendix A)

During the taping of the fifth grade class a sociogram was administered to the children in order to obtain a picture of classroom relationships at this particular time of the year. The results of this sociogram would be used later with videotape observers as a basis for determining how well they could detect classroom interrelationships by what they would see on tape. When actual observation was begun in the spring the same sociogram was administered again in order to compare the ability to appraise the class interrelationships occurring at the time of observation of those observing directly with the assessment of class relationships made by those observing by means of videotapes.

Child Development Tests

During the summer and fall semesters two forms of a Child Development Test (Appendix C-1, 2) were devised. Each included one-hunrded items covering broad areas such as developmental characteristics of different age levels, knowledge of concepts, terminology, and procedures in child study and research, theories related to basic needs, developmental tasks, learning, and growth principles and their application to classroom situations. The first of these tests was to be given at the beginning and close of the experiment, the second at the mid-point before two of the groups switched their method observation.

IPAT - personality test for children

Becoming sensitive to differing types of personalities in the classroom and the various roles either assumed by children or forced upon them by the human relationships operating within the group is an important learning task for the prospective teacher. For this reason the IPAT, Forms A and B were administered to the fifth grade for the purpose of comparing the results with observer appraisals of the children's personalities on the sociograms mentioned earlier and on a profile chart based upon this test. (See below) As suggested in the test handbook both forms were given in order to obtain a larger sampling of items since each form comprises only half the test.

The IPAT Children's Personality Questionnaire, "The CPQ," is both an individual and a group test designed to measure fourteen "distinct dimensions of personality."[14] (See Definition of Terms #13)

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[14] Porter, Rutherford B. and Raymond B. Cattell, Handbook for the IPAT Children's Personality Questionnaire, "The CPQ," Forms A and B. Institute for Personality and Ability Testing, Champaign, Illinois: 1960. pp. 5, 6.

Children's responses to this test have made it possible for psychologists and teachers to estimate likelihoods of success in various fields. Therefore, it seemed possible that, if the college students, on the basis of their observations of children in the fifth grade, were able to see children as the children saw themselves, the observation experiences would be fulfilling some of the major objectives of the course. Additionally, if one group of observers were more successful at this than others, then the method of observation could conceivably be a contributing factor to the development of better insight.

Teacher-Student Index of Children's Personality

Using the basic physical types, endomorph, mesomorph, and ectomorph plus the personality types and leadership or followership qualities suggested by the IPAT Personality Test a class profile sheet was devised which included all the names of the children along with a place to rate each one under the categories mentioned above. (See Appendix D) The teacher of the class was then asked to rate every child according to his knowledge about him after having worked with the group for about eight months. These charts were to be used with student observers at the close of the second four weeks of observation as a final check on their ability to acquire essential information about children through observation experiences.

Observation Guide

For the purpose of helping student observers to more adequately focus their attention upon significant behavioral cues an observation booklet was developed to guide them in recording specific conduct under sub-categories of physical, social, emotional, and intellectual behavior. The booklet also provides space for analyzing skills needed in the learning situation observed and for making generalizations about concomitant learnings, teaching procedures, and expressions of personal feeling about the observation. The last section of the guide offers an opportunity to raise questions which were of concern to the observer. For the purposes of the experiment students were required to record what they saw in one of these booklets after each observation session. When the guides were introduced to the observers the instructors stressed the fact that they could not expect to see everything included in the booklet during each observation session.

Discipline Cases

Two discipline case[15] studies were selected for the purpose of determining whether or not there would be any noticeable changes in attitude towards handling such problems after a period of observation. The question was raised whether or not the type and sequence of observation would have anything to do with a change in attitude, if it appeared. The case of Juanita was presented at the beginning of the semester and that of Ford at its close.

Theoretically, it seems that those observing directly would become much more conscious of the variety and causes of discipline problems encountered by a teacher and, thus, more concerned and possibly more understanding and less vindicative in their handling of these problems than would those observing by videotape. If so, this should be reflected in their reactions to the cases presented.

Initiating the Study

During the pre-registration period for the spring semester, 1965 sophomores enrolling Ed. 220, Introduction to Elementary Education, were randomly assigned to one of the four sections of this course. This was accomplished by arranging the block schedules for sophomores in a continuous one, two, three, four order, each of the blocks designating one of the four sections around which students were to build the remainder of their schedules. In some cases, where it would have worked a hardship on a student because of work hours or "car pool" rides, etc., this order was broken. The distribution in the four sections, after drop-outs became as follows:

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[15] American Council on Education, Helping Teachers to Understand Children, Prepared by the Staff of the Division on Child Development and Teacher Personnel for the Commission on Teacher Education, Washington, D.C.: 1945.

Section #1 - 26 students

Section #2 - 28 students

Section #3 - 19 students

Section #4 - 24 students

The first three weeks of the semester were spent in testing all students on (1) four one-half hour test tapes of a second grade group of children, (2) the Semantic Differential, (3) Form A of the Child Development Test, (4) the discipline case of Juanita, and (5) the Minnesota Multiphasic Personality Test. However, because the latter test is not as vital to this report as other phases of the experiment its uses will not be reported here.

One of the most fruitful techniques used in the study of children is the anecdotal record. This has been a basic requirement of the introductory course in the past and one which the two instructors felt should be retained if at all possible. The question arose as to whether or not students would be able to see enough of a child's behavior on videotape to develop such a record and to make tentative hypotheses about his personality development. Accordingly, with the help of Mr. Ray Smith, teacher of the fifth grade class to be used in the study, seven children, representing a variety in physical and personality characteristics and having an I.Q. range of 110 to 152, were selected for concentrated study by all four groups of observers.

Because of time limitations and the need to make certain that all seven children were studied in each of the four sections, students were not given the opportunity to select the children they wanted to study. Instead, they were "assigned" one of the seven by the method of drawing a name from among the others.

While the testing was being carried on in the lab sessions, the regular lecture sessions of all four groups of students were used to introduce them to the overall objectives of the course and to prepare them for the observation experiences. All students were given the same instructions, the same guide sheets, and the same general background in course content.

At the end of the three weeks students in Section one, taught by the first instructor, were sent to a fifth grade class in the campus elementary school to begin their observation while the other three sections, taught by a second instructor were assigned as follows, Sections Two and Three to videotape observation, and Section Four to direct observation. Those assigned to videotapes saw the same children the other two sections were seeing in direct observation. (See Chart 1, p. 29.)

At the end of four weeks--or the seventh week of the semester--another period was spent in testing all students on (1) Child Development Test - Form B, and (2) Four Test-Tapes of a Sixth Grade class. During this period they were also given a sociogram (See Appendix B) which paralleled the questions given to the fifth grade children on the sociograms administered at the beginning of videotaping in November and direct observation in February. The question to which the answer was being sought here was, "Can videotapes capture enough of the classroom relationships and non-verbal types of interaction to help the observer become sensitive to how children stand in the eyes of their peers?" Following this Section Two switched to direct observation while Section Four changed over to videotape observation. Section One continued with direct observation and Section Three with videotape viewing.

Upon the completion of the next four weeks of observation all four groups were brought together again for final testing. Form A of the Child Development Test was readministered as was the Semantic Differential. The second discipline problem, The Case of Ford, was presented to the students to determine whether or not there would be any notable changes in attitudes and suggested method of handling such problems and, if so, whether the changes would be more marked in any particular group.

Continuing Lecture and course materials on theory and principles of child development for all groups.

Chart 1
Sequence of Experiences

Duration	Control Group 1 (A)	Experimental Group 2 (B)	Group 3 (C)	Group 4 (D)
3 weeks	Preliminary instruction on principles of child growth and preparation for observation Testing of all groups on: Pre-test tapes of Second Grade Class Child Development Test - Form A Semantic Differential Minnesota Multiphasic Personality Test Pre-Observation statement of expectancies for 10-year-old behavior Discipline Case of Juanita Selection of Children for Concentrated Study			
Experimental Treatments 4 weeks	(A_1) Direct Observation 5th grade	(B_1) Videotape Observation 5th grade	(C_1) Direct Observation 5th grade	(D_1) Videotape Observation 5th grade
	*Conferences with Mr. Smith, 5th grade teacher--all groups			
1 week	Testing of all students on: Child Development Test - Form B Post-test Tapes of a Sixth Grade class Reactions to sociogram of Fifth Grade class			
4 weeks	(A_2) Direct Observation continues 5th grade	(B_2) Direct Observation 5th grade	(C_2) Tape Observation 5th grade	(D_2) Tape Observation continues 5th grade
	*Conferences with Mr. Smith, 5th grade teacher--all groups			
3 weeks Evaluation	Final Evaluation Experiences Child Development Test - Form A Semantic Differential Anecdotal Records Student Reactions to Method and Sequence of Observation Second Discipline Case Profile Charts of Fifth Grade Children Comparison of Observation Reports			

In addition to weekly observation reports, assigned readings from the text, An Introduction to Child Study, by Ruth Strang and a course bibliography, there were two other major requirements which students were asked to fulfill. The first involved the keeping of an anecdotal record, mentioned earlier in this paper, and summarizing these by making a tentative statement about the child's personality.and his general progress in social, emotional, physical, and intellectual development.

To complete the other major requirement students were asked to write an over-all evaluation of the course and to give particular attention to the method and sequence of observation which they had experienced. Because it was necessary to eliminate as much as possible the danger of writing to please the instructor, students were asked to submit these papers after the final grades had been sent to the records office. They knew that the use of videotapes for observation was being tested and that their honest and sincere reactions to the method and sequence were of importance of the study.

Summary

This chapter has described the procedures and techniques used in the study to test the comparative efficacy of direct and videotaped observation for developing observational skills. Findings are reported in the chapter which follows.

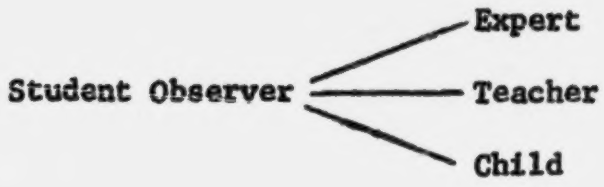
Chapter IV
Results and Conclusions

The data used in this study for comparing the four student groups included:

1. their frequency of agreement with (a) a panel of experts on behavior to be seen on a series of test tapes, (b) the classroom teacher's and the Children's Personality Questionnaire summaries of children's personalities, and (c) the children themselves on sociometric data collected about children during the period of taping and again at the beginning of the observation period
2. the acquisition of general understandings about child growth and development as measured by two forms of a child development test
3. changes in attitudes towards "Children" and "Myself as Teacher" as measured at pre and post observation periods by a form of the Semantic Differential and two discipline case studies
4. anecdotal records of seven children selected for concentrated study
5. final personal evaluations of the observation experiences.

For a number of reasons the writer did not narrow the study down to any one method of comparison, such as testing the student observers on a child development test. First, it would take a much more inclusive and more refined test than that developed to assess not only gorwth in identification of specific behavioral cues but the ability to generalize about these and to apply learnings to new situations. Second, there is no existing body of theory upon which to base any one approach. Third, since effective observation of children is a many-factored skill, it seemed that as many approaches to the subject as possible should be tested. The writer hoped that, by using such a procedure, aspects of the present observational program needing improvement might be more clearly indicated and fruitful avenues for future research suggested.

Description of the results which follow is based upon the agreement model of



Agreement With Experts

Prior to any instruction in observational techniques the four groups of students involved in this study were asked to react to four one-half-hour videotapes of a second grade class at work. Each of the tapes was designed to emphasize one of the four major areas of development-social, emotional, intellectual, and physical. During these playback sessions the tapes were shown once only after which the observers were asked to record significant child behavior noted in the four categories listed above. They were also directed to list what they noticed in the physical environment and the ways in which they thought the teacher influenced the learning situation.

After four weeks of observation all students were tested again using videotapes covering the same four categories of development but of a sixth grade class of children.

Though it would have been more desirable to test the DO-DO group by means of contrived situations in the classroom matching the situations on the test tapes, the problems related to accomplishing this seemed insurmountable at the time. The use of the same videotapes for all observer groups appeared to be the best means of guaranteeing that everyone would be looking at the same thing.

Reactions to the test tapes were scored by means of a check list developed from the responses to these same tapes by the panel of experts mentioned earlier. Any item upon which at least three of the panel members agreed was included in the list. These items were then arranged under the following major categories: (1) Psychological Environment, (2) Physical Environment, and (3) Children. Student responses which agreed with those of the experts were totaled and the averages per student for each group were determined.

Table 1

Number of Student Agreements with Experts on Pre and Post Test Tapes

	I Psychological Environment			II Phys. Envirn	III Children Phy.	Socio-Econ.	Intell	No. Observers
	A	B	C	A	A	B	C	
POST								
Section (DO-DO)	108	153	52	164	106	196	191	/26
(VT-DO)	105	193	73	167	159	220	209	/26
(VT-VT)	69	97	69	83	130	134	106	/17
(DO-VT)	115	175	125	110	90	133	134	/24
	A	B	C	A	A	B	C	
POST								
Section (DO-DO)	101	115	90	145	114	196	150	/26
(VT-DO)	97	130	88	101	120	217	125	/26
(VT-VT)	66	87	57	77	90	154	111	/17
(DO-VT)	88	117	88	87	138	208	156	/24

Table 2

Average Number of Responses Per Student on Pre and Post Test Tapes

	I Psychological Environment			II Phys. Envirn	III Children Phy.	Socio-Econ	Intell	No. Observers
	A	B	C	A	A	B	C	
PRE								
Section (DO-DO)	4.15	5.88	2.0	6.30	4.07	7.53	7.34	/26
(VT-DO)	4.03	7.42	2.8	6.42	6.0	8.46	8.01	/26
(VT-VT)	4.00	5.70	4.0	4.88	7.6	7.87	6.23	/17
(DO-VT)	4.79	7.29	5.2	4.58	3.75	5.54	5.54	/24
	A	B	C	A	A	B	C	
POST								
Section (DO-DO)	3.88	4.42	8.03	5.57	4.38	7.53	5.77	/26
(VT-DO)	3.73	5.00	3.38	3.88	4.61	8.34	4.80	/26
(VT-VT)	3.88	5.1	3.35	4.50	5.3	9.00	6.5	/17
(DO-VT)	3.66	4.87	3.66	3.66	5.75	8.66	6.5	/24

This analysis was unsuccessful in identifying any significant differences between groups. Though the VT-VT section is slightly higher per student than the DO-DO section in some of their responses to the Post Test tapes, these differences are not large enough to support the first hypothesis which suggested that guided videotape observation experience would result in more agreement with the experts than would the less structured direct observation experience.

The students in the VT-VT section seemed to have some difficulty noting aspects of the psychological environment in both pre and post test tapes, yet showed progress between pre and post tests in noting behavioral cues related to children's social-emotional development.

It is difficult to explain the drop in all four sections from pre to post test tapes. However, the writer is of the opinion that this may be due to the less formal and somewhat more permissive atmosphere of the sixth grade classroom used for the post test tapes. This may have confused the observers, making it difficult for them to sort out their impressions. It may also be due to the fact that the students knew their responses to test tapes would not be included in their semester grade for the course. In addition, technical problems which caused a loss of time may have contributed to this drop in responses.

A weakness in the test tapes stemmed from the fact that thirty minutes was too long a period for students to view, then record their observations. By the time they had an opportunity to write they had so many impressions it seems likely that some of the earlier ones had probably been erased by the later ones. It appears now that, to be of real value, they should run no longer than ten minutes, possibly five.

Student-Teacher Agreement

Although a teacher's judgment of a child is not thought of as infallible, a considerable amount of importance is attached to his ability to evaluate children's progress because of his opportunity to observe them in many situations over a period of time. Accordingly, upon the termination of the eight weeks of observation, Mr. Ray Smith, the teacher of the fifth grade class observed throughout the semester, both directly and by videotape, rated the children on their physical, social, emotional, and intellectual development. This he did by completing the "Student-Teacher Agreement" form described in Chapter II included in the Appendix. The student groups were also asked to complete this form and their responses were then matched with those of Mr. Smith's to determine to what extent they and his were in agreement about the children. This procedure was an attempt to test experimental hypothesis No. 2 which predicted that "the televiewing of videotapes prior to direct classroom observations will be superior to the televiewing of videotapes subsequent to classroom observations for the development of observational skills."

As Table 3 indicates the differences between the four groups are too slight to be significant.

Table 3

Student-Teacher Agreements

Mean-Number Agreements		
Section	(DO-DO)	105.23
	(VT-DO)	94.60
	(VT-VT)	103.77
	(DO-VT)	104.37

The greater difference between the teacher's evaluation and that of the VT-DO group who experienced videotapes first, then direct observation may have some relationship to their responses to the item "Myself as Teacher" on the Semantic Differential. Becoming somewhat more doubtful about their roles as teachers may have caused them also to magnify or misinterpret children's behavior.

Whatever the cause, these results did not support the hypothesis that videotapes followed by direct observation would prove to be the better sequence.

Student-Child Agreement

One of the important skills, which the instructors of the introductory course in elementary education try to develop in their students, is the ability to assess peer relationships at work in the classroom. Before the observational sequence for the VT-DO and DO-VT groups was switched in the middle of the experiment, students were asked to respond to a questionnaire related to the sociograms described in Chapter One. They were asked to estimate how the children would select from among their members their first, second and third choices on the basis of three criteria, i.e., "the person I'd like to sit next to," "someone with whom I would like to work on a committee," and "whom would you choose to represent the class in an interview with the governor." A fourth item asked the observers to list the children who they thought would be the top three students on all criteria. As can be noted in Table 4 below, Sections DO-DO and DO-VT, observing directly in the classroom, agreed with the children's own ratings more than did Sections VT-DO and VT-VT, observing up to this time by videotape

Table 4
Summary of Student-Child Agreement on Sociograms

Section	No. of Students	No. of Agreements	Mean
DO-DO	26	459	16.7
VT-DO	28	335	12.0
VT-VT	17	174	10.23
DO-VT	24	456	19.9

When considering the first experimental hypothesis of this study which states that the commonality of the guided videotape observation "will improve the effectiveness of instruction and increase the observational acuity of the students" the above information suggests that, without some direct classroom observation, students observing by videotape may not become as sensitive to classroom relationships and their effect upon the learning situation as would be desirable.

In terms of Hypothesis 2 of the experimental project a "combination of large screen viewing of selected classroom behavior and direct classroom observations should prove to be superior to the current methods of direct classroom observation." $\left(\substack{\text{VT-DO} \\ + \\ \text{DO-VT}} > \text{DO-DO} \right)$. However, when averaging the mean number of agreement, 15.95, of the two groups experiencing the combined sequence of direct and videotape observation (DO-VT, 19.9, and VT-DO, 12.0), and comparing that with the DO-DO, 16.0, this hypothesis was not supported.

The results of this comparison of students and children also did not support Hypothesis 3, which favored the "televiewing of videotapes prior to direct classroom observations" as being the superior sequence to be followed in planning observational experiences. According to this hypothesis Section VT-DO > DO-VT. The hypothesis did not hold as the DO-VT section demonstrated greater frequency of agreement (19.9) than did the VT-DO (12.0).

Although the number of student-child agreements in the four observer groups were significantly different, i.e., DO-VT, 19.9; DO-DO, 16.7; VT-VT, 10.23; VT-DO, 12.0 ($F = 6.84$, $p < .01$) the differences, however, do not support either of the two research hypotheses mentioned above.

This comparison between student-child was the only measure which demonstrated significant differences between groups. It seems to indicate that students need to have some direct exposure to the classroom situation early in the course in order to develop more effective observational skills, i.e., the children become more real to them as persons when seen in the classroom. This, in turn, probably creates an earlier awareness and reaction to specific individual and group behavior which provide clues to a child's personality and his status within the group.

Child Development Test

One of the hypotheses of this study was that guided televiewing of classroom situations should help students to better understand and retain the basic content presented in the course through lectures, films, and discussions. Accordingly, two forms of a test in child development were administered to the student observers in all four sections, the first at the beginning, the second in the middle, and the first again at the end of the semester. Both forms included one hundred items but the second form was an attempt at improving the first.

As far as the experimental hypotheses of this study are concerned the differences between the four sections were too slight to be of significance.

Table 5
Mean No. Errors on Child Development Tests-Forms A and B

Section	A-1	B-1	A-2	Diff. A1-A2
DO-DO	44.46	44.58	42.00	2.46
VT-DO	45.48	42.85	40.88	4.60
VT-VT	47.62	41.76	41.16	6.46
DO-VT	45.55	44.16	39.72	5.83

Semantic Differential

Two factors of a Semantic Differential were analyzed to see if there had been any change in observer attitudes throughout the semester. These factors were "Children" and "Myself With Children." Comparison of the four student groups on this test produced no significant differences between sections. However, Section DO-DO became slightly more positive about children than did Sections VT-DO and VT-VT,.while Section DO-VT became slightly more negative towards them. In thinking about themselves as teachers Section DO-DO remained about the same while the other three sections became slightly more uncertain about their roles as teachers. This might be due to greater awareness of the responsibilities of a teacher and, therefore, a correspondingly more objective assessment of self when taking the test the second time. However, the differences were too slight for this to be more than conjecture on the writer's part.

In comparing the VT-DO and DO-VT sections on the above two factors the first became slightly more negative on the "Myself As Teacher" while the latter groups became somewhat more negative on "Children." However, the differences are again too slight to support the third hypothesis favoring the videotape-direct observation sequence. Certain students became either much more positive or much more negative than others in the groups. This may be due to a personality factor which was not expolored in this study. (See Appendix E)

Reactions to Discipline Cases

One of the first topics that students usually want to discuss when they begin to observe in the classroom is the problem of discipline. This caused the writer to wonder whether or not the attitudes and approaches to the handling of discipline problems would change after a semester of observation. Would the students, in general, be more concerned with dealing with symptoms of behavior, i.e. punishing a child, at the beginning of the semester than at the end? Would one pattern of observation reflect more change in reactions to discipline problems than other patterns?

Two discipline case studies were presented to the four groups, the "Case of Juanita" at the beginning of the semester and the "Case of Ford" at the end. Students were asked to state their own personal feelings towards each case, to hypothesize causes of the behavior and suggest means of dealing with the problems.

Although this produced no significant differences between groups it does indicate that the experience of videotape observation only had no negative effective on Section VT-VT, since this group shows progress comparable to that of Section DO-DO. All groups evidenced growth in dealing with discipline from a counseling point of view, each group having only a few students concerned with dealing with the symptoms only. (See Table 6)

Table 6--Reactions to Discipline Case Studies

	Case of Juanita				Case of Ford			
Reaction	Section DO-DO	Section VT-DO	Section VT-VT	Section DO-VT	Section DO-DO	Section VT-DO	Section VT-VT	Section DO-VT
Accepting	5	9	3	5	1	0	1	6
Judgmental	28	22	11	13	10	14	10	20
Vindictive	1	8	0	2	0	0	0	1
Counselor	18	19	12	14	16	14	9	10
Identification with	1	0	0	0	0	0	0	0
Emotional	2	5	7	2	4	3	2	0
Reason for Reaction								
Understanding from own background	5	5	1	2	0	3	2	3
Child's behavior proves point	17	20	11	17	20	18	13	17
Babysitting experience	0	0	1	0	0	0	0	1
Interpretation of Behavior								
Home background	14	21	10	13	13	23	16	22
-Unwanted	3	0	2	2	1	2	2	3
-Unsupervised	13	11	6	8	25	20	9	8
-Undisciplined	5	6	2	3	18	13	9	7
-Mistreated	2	2	2	2	0	0	0	0
-Too much attention	2	1	1	1	2	0	1	4
Mistaken values	24	19	9	10	17	12	9	16
Physical causes	2	4	0	2	20	23	25	15
Basic needs unsatisfied	12	14	5	12	30	27	24	40
-Affection	14	6	11	7	2	2	6	7
-Security	8	14	6	12	4	0	2	7
-Recgonition	34	30	22	28	14	18	11	26
-Belonging	3	9	5	9	5	9	4	16
Treatment Suggested								
Therapy counseling	40G 43S	36G 33S	25G 20S	50G 19S	66G 83S	57G 44S	45G 31S	67G 72S
Deal with symptoms	6G 8S	3G 10S	1G 3S	1G 2S	55G 6S	4G 2S	4G 3S	5G 7S

* G = General Suggestions
S = Specific Suggestions

Anecdotal Records

The investigator was interested in discovering whether or not those observing by videotape would be able to see enough of a situation to record anecdotes of what appeared to them as significant child behavior. In trying to keep track of classroom activities would the camera interfere with a student's effort to acquire a total picture of an incident? Anecdotal records of Section DO-DO and Section VT-VT with their summary statements about the children's personalities were compared with the results of the Children's Personality Questionnaire as they applied to the seven children selected for study throughout the semester.

As can be seen in Table 7, which follows, students experiencing videotape observation only appeared to have no difficulty in identifying behavior which gave cues to the child's personality. Certain children presented difficulties to all students. For example, in Category F (See Chapter II) Chuckie's tendency towards a more serious nature was misinterpreted by both sections probably because of his occasional comments or preoccupation with something other than the job at hand. Neither group saw in his behavior his more trusting, naive nature, which is reflected in the results of the questionnaire mentioned above and supported by his teacher's observation. Because he employs vocabulary which is beyond many adults' use of language the observers seemed to think of him as being more sophisticated than he really is.

A similar reaction to Hankus'personality was reflected by both groups as they interpreted his behavior to be that of an easygoing, warm personality rather than a reserved, somewhat aloof person that his own responses to the Children's Personality Questionnaire indicated him to be.

Table 7

Comparison of Student Personality Studies of Selected Children With Their IPAT Test Profiles (Direct versus Videotape Observation)

Child		Categories													
		A	B	C	D	E	F	G	H	I	J	N	O	Q3	Q4
1. Cynthia															
Section DO-DO															
Student	1	1				1		2	1		3				1
	2							2					1	1	1
	3		2	1		1		**	1					1	1
Section VT-VT															
Student	1	1		1		1	1		2	1			3	1	*
	2	1		1				2	2	1			2		*
	3	1		1		1		1	1		1		1		2
2. Chuckie															
Section DO-DO															
Student	1		1	1	1	*									
	2	1	1	1		1		1	1				1		
	3		1		1	1*		**	1	1			1	1	
Section VT-VT															
Student	1	*	1	1		1	1	3	2		3		2	1	*
	2		1	1			*	2	1						
3. Kenn															
Section DO-DO															
Student	1		1	1			1	1	1				3		
	2		2	1		1		1	1		1				1
	3		2			1	1	1					3		
	4	1	3			2		1							
Section VT-VT															
Student	1		3	1		1		1	1		1				
	2		5	3		1		4	1	1	4		1	5	
	3		1	1		2	2	2	1		1			2	
4. Tommy															
Section DO-DO															
Student	1	1							*		1				1
	2	1	1	*				1			1				
	3	1		1		1			1						1
	4		1				*						*		1

Table 7 (Cont'd)

Child		Categories													
		A	B	C	D	E	F	G	H	I	J	N	O	Q3	Q4
4. Tommy Cont'd															
Section VT-VT															
Student	1	1	*	2			1	1	*				1	1	1
	2	1	*	1				1			1		1		1
	3	1	1	2		1		3	*				3		2
5. Patti															
Section DO-DO															
Student	1	*	3	1	1		**	1			1			1	
	2		*	1		2	2	1					1		
	3	1		1				1			1		1		
	4	**	1		1		1	2			*		1		
Section VT-VT															
Student	1	1	3	2	1	2		2		2	**		2		
	2	*	2	1			1	1			1				
	3	*	**					*	*						
6. Melva															
Section DO-DO															
Student	1	*		*											
	2	2	1	1	2		1	1	1	*	1	1		1	
Section VT-VT															
Student	1	1	1					1	1					1	
	2	1	1	1		*	*2	1							
	3	1	2	1		1		2	1		1				
7. Hankus															
Section DO-DO															
Student	1	*	1			2	1	1			1		1		
	2		2	1		1	1	**	1						
	3		2	1	1			*		2					1
Section VT-VT															
Student	1		1	2	*	2	1	1*	1		1		1		1

1, 2, 3, 5 = number of times student support category with specific item
* = number of times students responses are direct opposite of IPAT item
*1 = student confusion because of conflicting behavior

Categories D, I, N, Q_3, and Q_4 seemed to present more over-all difficulties for both groups.

These results do not support any of the three experimental hypotheses but do seem to answer one of the writer's questions raised at the beginning of the study, i.e., "Can observers see important behavioral patterns by videotape viewing which will help them to gain insight into children's personalities?"

Observer Questions

Believing that the kinds of questions students raise have some relationship to the quality of the experiences they are having, the investigator was interested in discovering whether or not one type of observation might result in more and different kinds of questions than another. Students were given two opportunities after each observation session to raise any questions which they would like to have incorporated into a lecture or used as the basis for a conference. Each time those observing directly went to the classroom they left a card with the teacher to indicate attendance and to include comments or questions about what they had seen. Those observing by videotape had the opportunity to raise questions immediately in the follow-up discussions after observing a tape. No exact record was kept of these sets of questions but, shortly after the second four-weeks' observation period got underway, it became obvious that the group having the VT-DO sequence was asking many more questions than any of the other sections and continued to do so for the rest of the observation session. Mr. Smith, the fifth-grade teacher, personally wrote answers to the questions written on the cards left with him after students visited in his room and came to the college classes twice for group conferences with all four sections.

The second opportunity for raising questions was available when writing the weekly observation report. A section of the report booklet was set aside for the inclusion of questions or concerns of the student observer. The instructors then attempted to deal with as many of these as possible during class sessions.

A careful record was kept of the questions included in the observation reports and later they were organized and tabulated under the following four major categories and sub-categories:

A. Factual Questions
   1. Techniques and School Practices
   2. Course Assignments
   3. Teacher
   4. Children
   5. Discipline
   6. Creativity
B. Why Questions
   1. Classroom Practice
   2. Discipline
   3. Children--Peer Relationships
   4. Course Requirements
   5. Teacher's Handling of Situations
   6. Behavior
C. How
   1. Individual Differences
   2. Peer Relationships and Individual Adjustment
   3. Manners
   4. Motivation
   5. Teacher's Personal Feelings
   6. Discipline
   7. Parents
   8. Causes of Behavior
   9. Special Techniques--Creativity
D. Clarification of Philosophy
   1. Teacher Behavior
   2. Classroom Climate
   3. Guidance of Children
   4. Causes of Behavior
   5. Discipline
   6. Teaching Goals
   7. Creativity

The above categories were determined after analyzing a sampling of every tenth report for the most common concerns.

Categories A and B required only quick, factual answers while categories C and D represent questions which necessitated more involved explanation or discussion. For a question to be assigned to category C it had to contain the element of application of philosophy to a situation. For example, a student might ask a question such as the following, "I realize H still needs much attention, yet I know he also needs to become more independent. How can I determine what is enough attention and what will help him to become more independent?" Questions assigned to Category D could be represented by a question such as "When students have no interest in math, for example, but use the period for other worthwhile studying such as reading for enjoyment, can they be allowed such privileges to do as they wish? If yes, won't they be neglecting an important phase of learning? If no, wouldn't they be rebellious and all the more uninterested?"

According to Table 8 which follows Section DO-DO were more concerned about Category A, questions seeking facts, and Category B, Why questions which actually required simple factual answers. The other three groups appeared to be more concerned about Category C, questions related to the how of putting theory into practice, and Category D, question which dealt with the clarification of philosophy. This difference may be due to differences in the teaching methods of the two instructors or possibly in the makeup of the student groups.

Table 8
Major Types of Questions Raised by Observers

Category	Section DO-DO	Percent Total	Section VT-DO	Percent Total	Section VT-VT	Percent Total	Section DO-VT	Percent Total
A Factual	135	51.7%	180	40.6%	93	38.4%	117	35.7%
B Why	29	11.1%	27	6.2%	15	6.2%	19	5.8%
C How	21	8.1%	91	20.5%	89	36.8%	90	27.4%
D Philosophy	76	29.1%	145	32.7%	45	18.6%	102	31.7%
Total	261	100.0%	443	100.0%	242	100.0%	328	100.0%

All four sections had greater concerns about children and classroom practices (see Table 9) in Category A while questions related to Category B seemed to be of importance to only a few students in all groups. Section VT-DO, VT-VT, and DO-VT appeared to be more concerned than Section DO-DO about the problems of motivation, peer relationships, and causes of behavior in Category C. In Category D Sections DO-DO, VT-DO, and DO-VT seemed more involved than Section VT-VT in questions related to teacher behavior

Table 9
Spread of Questions Over Four Major Categories

Categories	Section DO-DO	Section VT-DO	Section VT-VT	Section DO-VT
A--Factual				
1 Teaching Techniques	36	84	21	50
2 Course Assignments	12	13	25	6
3 Teacher Behavior	15	21	7	24
4 Children	60	59	37	36
5 Discipline	11	2	0	1
6 Creativity	1	0	0	0
B--How				
1 Classroom Practices	7	5	0	6
2 Discipline	3	4	0	3
3 Peer Relationships	11	7	1	2
4 Course Assignments	3	9	0	0
5 Teacher Action	5	7	7	4
6 Child Behavior	0	5	3	3
C--Why				
1 Individual Differences	2	15	9	10
2 Peer Relationships	7	16	15	21
3 Manners	1	10	5	2
4 Motivation	3	30	30	22
5 Teacher's Feelings	2	1	0	7
6 Discipline	4	12	1	4
7 Causes of Behavior	1	10	6	11
8 Creativity	2	4	12	7
D--Philosophy				
1 Teacher Behavior	12	32	9	20
2 Classroom Climate	10	10	2	18
3 Child Guidance	27	46	17	29
4 Causes of Behavior	10	26	10	10
5 Discipline	8	13	3	7
6 Teaching Goals	3	14	4	7
7 Creativity	0	3	2	6

and the classroom climate. Section VT-DO appeared more concerned than the other sections about guidance of children and causes of behavior though all sections seemed alert to problems of child guidance.

Section VT-DO also seemed somewhat more concerned than the other sections about clarifying philosophy and theory related to discipline and teaching goals.

Sections VT-VT and DO-VT appeared to be somewhat more interested in the area of creativity than did Sections DO-DO and VT-DO. This may be due to the fact that these two sections had the opportunity to see a tape of the fifth grade in an art class and another in a creative writing lesson during the time that the other two sections were experiencing direct observation.

In an attempt to determine whether or not any changes took place over the semester in the kinds of problems which gave the observers some concern the questions from the first two observation reports were compared with those of the last two reports. In Table 10 which follows there is the suggestion that Section DO-DO did not change significantly while Section VT-DO moved considerably from the A and B categories to the C and D or more philosophical levels. Section DO-VT became somewhat more involved with questions of a philosophical nature. In other words, the two sections experiencing both direct and vidotape observation seemed to show more depth in the questions they raised as the semester progressed.

Identification of Role Behavior

One of the important sub-topics included as part of the content in the introductory course in elementary education is the subject of group dynamics

Table 10
Changes in Types of Questions Raised By Observers
(First Two Sets of Questions Compared With Final Two Sets)

	Section DO-DO				Section VT-DO				Section VT-VT				Section DO-VT			
	First Two		Last Two		First Two		Last Two		First Two		Last Two		First Two		Last Two	
Categories	No	Per Cent	No	Per Cent	No	Per Cent	No	Per Cent	No	Per Cent	No	Per Cent	No	Per Cent	No	Per Cent
A	40	50.0%	31	48.4%	67	46.9%	30	29.0%	28	41.8%	31	43.0%	39	38.6%	33	38.0%
B	6	7.6%	6	9.3%	12	8.4%	3	3.0%	--	-- --	8	11.0%	9	8.9%	2	2.0%
C	6	7.6%	7	11.0%	32	22.3%	24	23.3%	26	38.8%	21	29.2%	20	19.8%	30	34.0%
D	27	34.2%	20	31.3%	32	22.4%	46	44.7%	13	19.4%	12	17.0%	33	32.7%	23	26.0%
Total	79	100.0%	64	100.0%	143	100.0%	103	100.0%	67	100.0%	72	100.0%	101	100.0%	88	100.0%

Much of the study and discussion revolves around the various roles which children assume as they move into different types of situations and the more permanent roles which tend to characterize them in their own eyes and in the eyes of others. To discover whether or not there would be a noticeable difference in identification of role behavior between those who experienced direct observation only and those who experienced videotape observation only, every fifth report written by the two groups of their first and last observation was selected for comparison. No role was counted if the observer failed to give a descriptive account of behavior to support his identification of the role. Roles identified by both student groups are listed below:

First Observation Report		Second Observation Report	
Section	Section	Section	Section
Boss	Leader	Organizer	Clown
Follower	Feminine	Leader	Brainstormer
Leader	Clown	Clown	Actor
Submissive	Aggressor	Bully	Supervisor
Unassertive	Information Seeker	Ideas Man	Leader
Antagonist	Observer	Athlete	Secretary
Initiator	Tomboy	Elaborator	Initiator
Challenger	Rebel	Socializer	Harmonizer
Friend	Teacher's Pet	Intellectual	Autocrat
Studious One	Tough Cookie	Questioner	Laissez-faire leader
	Intellectual	Joker	Mediator
	Isolate	Best Friend	Sharer
		Athlete	Democratic leader
			Non-conformist
			Helper
			Mother
			Exaggerator
			Competitor
			Critic
			Secretary
			Chairman

As can be seen by the various roles listed by the two groups Section VT-VT seemed to have no difficulty in identifying such behavior. Although this information does not clearly support any of the experimental hypotheses it does provide an affirmative answer to the question "Can observers identify significant behavior through televiewing which will give them important clues to the ways a child functions within a group?"

Implications for Teaching

One of the major questions raised by the writer at the beginning of this study was "Is it possible for students observing by videotape to identify significant teacher behavior and to draw inferences from what they see for their own future teaching?" With this in mind the same randomly selected reports chosen for role identification were used to collect the following statements of implications for teaching:

First Report

Section DO-DO
Observer:

1. The art teacher explained to us that she is firm with her students and she likes to treat them like adults. She said she embarrasses a child to make him learn not to make the same mistake. Is this a good way to handle the situation?
2. This observation is not to say that I will meet up with those same situations. However, being exposed to as many of the varied aspects of the school day, I can prepare myself for some parallels --it wouldn't make the school and the children seem so far-fetched an idea. It will help me to see how valid my textbooks are.
3. Implications are what I hope to form during this course. I feel that I am not ready to answer such a statement after only two hours with the class.

Section VT-VT
Observer:

1. I am really beginning to ask myself if I am fitted to the role as a teacher--will I be adequat in the interests of the childre will I be able to guide in the best interests of the child, wil I be able to motivate learning and as a whole help create an individual acceptable to societ
2. No reactions
3. Teaching is difficult. I have seen that what the teacher teac es will affect her classroom; how she handles each problem, each situation; her schedule, her ways of making abstract information more concrete and easier for the child to understand; how she makes her children want to learn and go further in learning by himself; how she sets up her room; and many other

First Report (continued)

6. No reactions

factors are very important in the development of each child. What a teacher does and how she motivates a child is very important. These pas weeks have taught me to follow my education classes very closely because what I learn and apply will benefit me much in the future. Each teacher in the films has taught me much as to the way children are to b handled effectively.

4. Every child is conveying some thought, some part of his personality with his actions. I should be able to catch actions used for gang acceptance. I should help child ren who are socially out of the gang to become a member of the group.

Seventh Report

Section DO-DO

Observer:

1. After watching Mr. Smith these past weeks and after hearing him speak to us, I've come to the conclusion that he lets his pupils take the responsibility for most of the things carried out in class. He is, as we have decided, quite permissive. I think that when I become a teacher I would never be able to control a class if they were to be as "free" as they are in his class. To get control I would have to be much more firm, in which case the responsibility of things done in class would most likely rest on me.

2. I should be aware of cases like Lanny's where I would communicate my concern for them--even when there are times I must reprimand.

3. During my observation period this week, I saw Mr. Smith really put his foot down. That is, he made

Section VT-VT

Observer:

1. In thinking about a class party it is a good idea to know what the s school policy states about it. It is good to have a permissive climate where the children can suggest ideas and solve problems among themselves with some guidance from the teacher. They learn much more this way. It is always an advantage to be humorous with the children because it brings you closer to them. Also in teaching these children self-control it is best not to tell them how to handle themselves but rather suggest to them in a firm way that they are letting themselves get out of hand.

2. As it has many times before, this has shown me that students can carry out their own plans independently with perhaps much better results than if the teacher planned it. I feel that the students have to be in the planning if they are to participate in anything full-heartedly.

Seventh Report (continued)

them put their heads on the table twice after warning them about the noise they were making and he took back the papers he had passed to them. Although he was much stricter, the children's behavior did not improve. What can a teacher do in such a case?

4. Letting the children check their own work right after a spelling or any test for that matter, leads to a better learning experience. Their mistakes are fresh in their minds and they can correct them then and there.

5. I should become acquainted with the spelling vocabulary and methods of teaching it. I was quite dissatisfied by the way it was carried on so perhaps it will cause me to devise another method. It reminded me of how important spelling is.

6. Since the children are of primary concern, personal problems of the teacher should be put aside.

3. Fifth graders are very responsible. The teacher's role is to encourage children to speak up and share their ideas and lead them in the right direction. He must help them to plan what they want to have and sort of compromise with what he has in mind. Accentuating the positive is very important in encouraging children to share their ideas and to not be afraid of speaking up. Saying things such as, "that would be fun," "excellent," "that's a fine suggestion," makes a child feel worthy. The atmosphere that the teacher makes is very important. It is a determiner of how the class will act, interact, respond to his ideas and questions. Children at this age are capable of judging their own behavior. When discussing and planning a party, children are generally and normally noisy. Children are capable of being responsible for their own behavior. Children of this age are aware of the value of money. Atmosphere of freedom is very effective. Children of this age are capable of giving and receiving constructive criticism.

4. React more pleasantly and be more lenient during party activities so that children will be able to enjoy themselves. At the same time I should watch for characteristic behaviors, because during such activities, different sides of a child might appear. Have children plan the party by themselves because they are gaining valuable experiences working together, organizing, and meeting problems. Never have an evaluation right after the party because the children are in a festive mood and have a difficult time settling down. Help the children with the planning to build a foundation. For example, have a class discussion of the party discussing the important details, and

Seventh Report (continued)

then go into committees to work out the finer details. In this way the children will have something to work from and won't become frustrated. Have the plan for the day on the blackboard so the children would know what follow what. This procedure will prevent frustration for the teacher who would otherwise be asked questions by children throughout the day.

These few samplings of reports from observers in the DO-DO and VT-VT groups suggest that signficant teacher behavior can be identified on videotape and that students do gain enough from such observation to help them extend and deepen their insights into the process of teaching. As far as the relationship of the above statements to the purpose of this study is concerned they do not lend support to any of the experimental hypotheses but do indicate that student observing by videotape can be made aware of factors in the teaching situation which affect child behavior.

Student Evaluations of Their Observation Experiences

Logical rationales were presented in the student evaluation of both observational techniques. Some comments typical of the reactions of students in Section DO-DO in favor of direct observation were as follows:

"The children seem more human in the tapes after associating with them personally in direct observation."

"... they were real people. I lost the idea that they were actors."

"In direct observation you sometimes get to work along with the children , as in one case, the art teacher permitted the student observers to work with the children in their block printing."

"I was able to go into a class, see what the children had been doing before I came (by noting the plan on the blackboard), and observe how the work which had transpired was affecting the children at that point."

"One can see the child and note his reactions when he suggests or defends something."

"Direct observation proved to be very informative, challenging, and exciting. It provided an experience that I feel can never be had in any other way."

"No book or reading could substitute for the direct observation experience."

"In direct observation there is greater opportunity to see how children react without supervision."

"As a whole, I feel that nothing can surpass direct observation in acquainting one with a real classroom situation."

"We can observe a child who interests us as long as we wish."

"In direct observation a person has to notice everything at the time it happens, for he knows that, if he doesn't catch each action at the moment, there will be no second chance. He must learn to identify the important behavior and sort it out from the behavior which is of no consequence."

Disadvantages of Direct Observation

The disadvantages pointed out by those who experienced direct observation were cited as follows:

"The situations observed were the same. Some of the children were very conscious of our presence. (I did not get the chance to exchange my time schedule with anyone.)"

"Children are able to see you taking down notes and many of them strain to see what you are writing about."

"There is always a chance that children are not themselves but are putting on an act just for you."

"Time was limited and at times I had to leave the classroom in the middle of an activity, thus leaving a gap in my observation. Moreover, I couldn't find out the outcome of some activities. This, I felt, would have helped my analyses and conclusions. .... It was difficult for me to restrain my emotions as directed when something funny or tragic or disturbing happened."

"The main disadvantage I feel is the time factor. In the OP situation, the observer must be in class at a certain time, she throws the C.T.'s schedule out of whack, i.e. the C.T. may be expecting only five girls for a certain hour, and instead, finds eight or ten girls, and is caught short of chairs, or other materials. With videotapes the observer can go to a make-up session at a later date."

"Not all the observers happen to see the same situation. By this, I mean that if in Tape No. 29, one of the main points is watching Johnny finally catch on to certain spelling rules, the observers would be sure to see it whereas, if it had been an actual classroom situation, several of the observers would have been looking at other students, and would have missed this important learning breakthrough. Also, not all the observers in (for example) Section One of Ed. EE 220 would be present at classroom observation on June 3 at 9:00 and would miss seeing this breakthrough first hand, something that everyone in the class could see if it had happened in a videotape. Also, a videotape would enable one to have a replay of the same situation."

"Once an action is missed it is gone forever."

"Inconvenience of observation time."

"Hard to concentrate on particulars when one is surrounded by a surge of activity."

"Not being able to move about which meant that you chould observe some students and some not at all."

"Could not closely observe anyone because students were quite aware of the observers."

"For some activities students were all over the place, which made it hard to observe a substantial group."

"There's so many things going on that you don't know where to watch."

"Can't discuss many of these things in class because of the lack of common experience."

"Still hard to observe the child you are supposed to be watching because of the child's absence, your inconvenient seat, etc."

"Can't really take full notes because the children become self-conscious."

"Perhaps too much of the observation time is taken up by room changes, "free periods," study time to finish assignments, etc. (On the tapes, time is used to its fullest.)"

" We may get distracted by things that certain children are doing that are not so important at the moment for our learning experiences and miss out on important cues we could have picked up."

"Oftentimes too many of us were observing at the same time and the room was too crowded. We seemed to get in the children's way, also distracted them too much."

Comments Favoring Tape Observations

Comments favoring tape observations are represented by the following:

"There is usually time for a question and answer period."

"The observer tends to remain more objective through tape observation when there is no contact whatsoever as compared with direct observation when children are actively engaged in activity right before your eyes."

"Because everyone observed the same thing one would expect similar hypotheses about the children's personalities. However, it was most interesting to note the variety of assessments of characteristics which evolved."

"It facilitates discussion because we have all shared the same experience--the instructor can also point out examples of what is taught in class, e.g., 'concomitant learnings.'"

"One thing that life can't do, but tapes can, is to have a "re-run" of the same scene. Tapes can be played and re-played to the satisfaction of the observer (with no effort by the 'actors'). Then the observer can double-check her notes and add anything she may have missed the first time. Through the wonders of science it is possible to 'squeeze in' several days into one hour."

"Having the instructor in the room with us as the tape went on was a great help due to the fact that she could answer our questions then and there. Pertinent data were given as background and answers at that specific moment help us."

"The members of the class saw the same tape so we were able to discuss any behavioral pattern seen in the tape in class as well as out of class. When we didn't comprehend certain behavior, we'd ask our instructor and she would know exactly what action we were referring to. She could also comment on our observation report if we had misinterpreted a certain action, whereas, in direct observation she wouldn't know what actually happened except through the observer's explanation."

"(Every tape presented a Melva, who to some degree resembled the Melva of the previous tape and yet a Melva who was quite different.)"

"At first, I had a very negative attitude toward observing by tape only because I so wanted to see children in action and to have a chance to see a class in action. However, as these tapes were seen, I saw many advantages in observing by this method.

For example, the class could discuss tapes bacause we had a common experience. Another advantage lay in the ability to refer back to specific areas and to view a particular behavior over again. This greatly helped those of us who missed a significant behavior. It also can be useful to the instructor since she can point out certain behavior to illustrate things. She can also be more helpful with suggestions of what to look for in the way of cues, since she has also seen the tapes.

Because the camera generally focuses on one behavior at a time, one can concentrate on that action and not be confused with trying to see everything at once. Also, since a trained person is directing the camera, the viewer will not generally concentrate on the insignificant, since such situations would be more or less eliminated.

The tapes also enable us to have a closer view of children at work. While observing directly, I don't think that one could wander around the classroom."

"The inadaquacies of viewing with films were generally technical."

"At times, the camera changed scenes so quickly that it was difficult taking notes as well as to get the relationship from one scene to the next. For example, the camera would focus on a child in the front of the classroom and then suddenly switch to another child engaging in a different activity at another part of the room. We had to become adjusted to this abrupt change and sort out in our mind these pieces in order to get an over-all picture of the class at that specific moment.

"Nothing is quite like seeing the 'real thing,' and although the tapes had much to offer, I feel I would have enjoyed better, and gained more, from viewing the children by direct observation.

Since this videotape medium is so impersonal and the children being observed are so removed from the observers, many of the students became drowsy and sleepy. There was also a strain on the eyes when the set was not focused well or the lighting was poor. Many students had to squint and before long their eyes became so tired that it was difficult keeping them open. I sometimes found my eyes becoming watery and I developed headaches. However, when we viewed the tapes on the regular T.V. set monitor, I did not have these symptoms."

Disadvantages of Videotape Observation

"The observer is limited in sensing feelings and the general climate of the day."

"The tapes do not reveal the 'realistic' situations in which children are distracted, disinterested, and restless."

"Under actual classroom observation it was difficult to keep a straight face; we developed a bad habit from watching the tapes."

"On videotape, it is more difficult to observe the child under your study."

"The observer is limited to the behavior caught by the camera. Therefore, the observer may have missed something which the camera didn't get."

"The other unnecessary sounds picked up by the microphone made it difficult to hear and understand what the children were saying."

"The children's awareness of the camera may have caused them to behave differently than they normally would.

"Could not observe the students' written work."

"Does not give true idea of weight, looks, and size of children."

"We cannot see the behavior going on in the whole classroom. If focused only on one area we may miss something significant in another area. Sometimes we hear voices but we don't know who is speaking because the camera is not focused on that person."

"Tapes are not all good as they may seem. Like anything else in life, there is another side to the story. For one thing, tapes are very limited in scope; an observer can't get the whole picture. An example of this is when K answered two of the teacher's questions in one of the tapes. The teacher called his name, and yet I had the feeling that he had volunteered his answers. Because of the difficulty of getting the whole picture, many incidents on tape can be misinterpreted by the observer.

Another disadvantage is that an observer can't really know about another person until they come face to face. For example, you can't tell a person's height, weight, etc. by tape.

Sometimes when you want to watch an individual's activities more (to learn more about that particular individual), the camera-man has other ideas and switches the scene. In other words, the observer is controlled by the camera-man; the observer has to see what he tells her to see."

"Many times the tape was blurry and hard on the eyes. And when this happened it often took 'ages' before the adjustment was made."

"Because each of us had a 'child' we were concerned about having equal opportunity in viewing him. However, in some tapes I had only glimpses of my child."

"The tapes became boring at times, although this may be due to our not being there in person viewing the activity."

"Because we were focusing on seven children in particular, I think we did miss out on seeing the group as a whole."

"Although I did mention the audibility as an advantage, let me add that often the mikes picked up every sound, thus producing a jumbled mess.

"Another disadvantage was trying to take notes in that semi-dark and sometimes pitch black room. When we looked down at our notes, something important slipped past us on the screen. It was frustrating at times."

Evaluations of the DO-VT Sequence

"I feel that I, personally, got more out of direct observation than I did out of tapes, perhaps, because I was observing Hankus. He was so quiet on tape but the opposite during direct observation. However, if I were watching someone like Tommy tapes would have been more beneficial because he is a child the teacher is apt to overlook in the classroom. As far as the sequence is concerned direct observation gave us an idea of what the students were like and one could take this idea into our taped observation."

"The sequence in which I observed the children was very satisfactory. I feel that experiencing direct observation first prepared me better for observation by tapes. Direct observation acquainted me with the children's physical features and helped me associate those with their names. This made it easier to identify the children as they were seen on tapes and this influenced my understanding of the children's behavior and the conditions which facilitated or hindered their learning. I also found it emotionally much easier to make the transition because, during direct observations, I had to control myself so that my expressions or reactions would not have any negative effects on the children; but when I began observations by tape, I could be more at ease. (I realized, though, that I'd have to maintain that control as a teacher.) On the other hand, if I had observed by tape first, I feel I would have had a harder time making the adjustment to controlling my reactions to the children's behavior, for I might have been so free and at ease during the observations by tapes that I couldn't have truly realized the effect it could have on the children's behaviors.

I may have shown a favoritism toward direct observations, but I enjoyed both very much and my gains were considerable. This contact with children and the actual school situation taught me more about the teaching profession, the importance of understanding the children, and it made me more aware of my values, weaknesses and strengths.

"I had observation first and when we switched to tapes it was such a let down."

"We observed the children by direct observation first and then by tape. Since there was more to observe in direct observation and since it was covered first, we understand the classroom situation better and we could more or less judge if the camera focused too much attention on one child. Since our last reports culminated our findings it was advantageous for our entire section to see the class on videotape and in one particular activity for we could discuss it afterwards and we could write our reports more objectively."

"At first I was strongly against watching tapes after having direct observations. Later I did not mind it at all because the tapes were effective in furthering our learning of children. The tapes depicted many different classroom situations which I thought was very advantageous. I feel we were not at any disadvantage because we got acquainted with the students before hand."

"I feel that observing in the classroom before observing on videotape is more effective. I prefer this sequence for the following reasons:

1. After becoming familiar with the children through direct observation, a student will have an easier time identifying each child on videotape and thus have an easier time taking notes.
2. A student can compare the children's present behavior with their behavior shown on the tapes which were filmed earlier in the year.
3. Because the lab instructor often discusses the tape with the students immediately after it is shown, I feel that it would be easier for the students to evaluate the children after having familiarized themselves with the children in the classroom during direct observation.
4. After having observed the children at the same hours each week, it was more interesting to see them in different types of activities and situations on the tapes."

Evaluation of the VT-DO Sequence

"I feel that the tapes are good for the beginning for they help us in picking out significant behavior, but then direct observation is needed to really understand the classroom situation. There are many activities we have to be aware of simultaneously, but it's worth it!"

("Since we all saw the same behavior and reacted differently to it, I think seeing videotape first laid the groundwork for objectivity.")

"Reflecting upon my observation experiences, I think that my first type of observation (tape) really did help me to prepare better for the second. The instructor was able to point out the significant activities, behavior, etc., and so, for the direct observation, I was better able to find these things for myself. Then, too, we learned to limit our observations: otherwise I would be distracted by all the activity going on in the class."

"I felt that our having the 'tape' before the 'direct' was most appropriate, because we got an introduction to the children. We could relate their faces to their names at the end of 'tape'; so when we began 'direct' we were able to notice them without difficulty. Also in 'tape' we got a preview of what we should look for in 'direct.' Finally we were so familiar with the children (personality, gestures, responses, behavioral patterns, etc.) that we felt at ease with them while in actual contact with them. We knew more or less what to expect from them and we didn't have to take so many notes. This I think, made the students less uncomfortable, and we appreciated them as children instead of treating them as objects to be observed."

"I consider myself fortunate to experience both ways of observation. The sequence which I followed, that is videotape and then direct observation, for myself I considered best. From viewing just certain situations and certain activities to viewing a whole classroom in action, this broadened my view in observation. I consider videotape as a stepping stone to direct observation. Videotape has helped a lot by preparing me in taking notes, what kind of situations to watch for and presenting various other cues. The only regret I have is that I was unable to observe directly the children in various activities.

"My first type of observation was through videotape followed by direct observation. I feel that the sequence would have been more effective if it had been reversed. The tape observations did not accurately picture the children's physical characteristics. There were more disadvantages in the tape observations. The direct observations gave clearer and better pictures of the children and their learning atmosphere. If the direct observations were first in sequence, the true pictures we would have observed first would really help in disregarding the flaws that were seen through the tape observations."

"I feel the sequence of tape followed by direct observation was ideal, but that the experience would have meant more if I had been able to observe directly for just one hour before viewing on tape. This would have given me a chance to see the class as a whole, observe size, relationships, teacher-pupil reactions and room environment.

"The order of observation should have been camera observation, first, and the classroom observation, second.
The camera observation showed us what to observe."

"I feel that the sequence in which the tapes preceded the live observation was a good arrangement because it enabled me to find out where my weaknesses lay before getting into live observation where nothing can be repeated for me. In other words, the tapes made me more proficient in observing behavior. They helped me to have a clearer picture of each type of development since the class could discuss a situation which had been observed by all the students. By the end of the tapes, I felt more prepared to observe in a class without the feelings of insecurity and anxiety I had on the first day of tapes."

"I liked our sequence of having tapes in the beginning and observing and having tapes at the end because the tapes in the beginning prepared me for observing the children. It gave me a glimpse of what to expect in a classroom and some things to be aware of. Having tapes at the end was good because it killed the monotony of seeing the children in the same situation (since we had a scheduled time we saw the children in the same type of activity). I strongly recommend observation for next semester in Ed. EE 220."

"I felt the sequence of first viewing tape and then going into the classroom for direct observation was very beneficial. Since this was most likely the first experience for most of us in observing children and knowing what to look for, it was quite muddled in the beginning. By watching tapes at first everyone had the same experience; this we could talk about and thus understand better what we had seen.

The tape can be shown again and again thus providing a much better opportunity for understanding.

Later, when we, as observers, have learned what to be aware of and are better equipped to label and understand the behavior, I feel it is good to get into the class with the children. By being in the classroom the interactions can really be seen much easier. The children seem real and this is a good preparation for the time we shall be teachers."

"I think the sequence of observing the children by video-tape first and then by actually being in the classroom best enabled me to look for and recognize significant behavior. In the video-tape, the camera focused on one child or several children at a time. I was able to clearly observe individual responses to the environment. Moreover, the camera was able to focus very closely without the child's knowing that he was being filmed. Thus he was less aware of being observed and his responses were natural. (I am aware that this was not true at all times, but I think that under ideal conditions it would be so.)

In both situations I was able to see how the children and the teacher used the school materials such as workbooks, reference material, visual aids, and art supplies."

General Comments and Suggestions

"Viewing the children by both direct video-tape observation was advantageous because both have their biases and limitations and each acted as a control on the other. From direct observation we could see details of the child and his environment (i.e., the way he kept his desk, his spontaneous mannerisms and conversations that perhaps the camera could not pick up in time) whereas observation through tape afforded us the opportunity to view what a particular child was doing (i.e., claywork) more closely for it would make the child quite uncomfortable if a group of observers looked over his shoulders."

"I think there is an advantage to be gained in observing both by tape and direct observation. As a whole the tapes tend to concentrate on the individual and his particular situation and reactions while direct observation shows how the individual reacts in the group and to the whole situation (environment). Therefore the tapes probably train one to note individual behavior and to interpret it while direct observation enables one to spot trends in behavior more easily. There are advantages and disadvantages in either sequence but I favor the tapes-direct observation sequence with modifications. One difficulty I found in starting with tapes was that I was totally unfamiliar with the classroom procedures, atmosphere, and layout. Perhaps it would help the novice if he were given some introduction to the class and classroom situation beforehand. The tapes were helpful as an instructional device which helped to train the observer in what to watch for, thereby making it easier for him when observing firsthand."

"I feel that videotapes are a wonderful observational technique that helps the student to gain insight into the specific and significant behaviors of these children. However, I still feel that direct observation has its advantages too. Therefore, I would propose that the videotapes be used mainly for observational guidance and that direct observation be used during the two week rest period to supplement the tapes. It would be much more useful and the student will be able to capitalize on what he has learned and gain more insight into the children's behavior."

"Personally, I think both tapes and direct observations should be used. What tape lacks, direct observation provides and vice versa."

"I don't in any way feel as though I have been cheated by not observing in the class personally. Maybe PE would be more effective seen in person, but I felt sufficiently adequate being the unseen observer."

"Regardless of the sequence, I feel that it is a better experience to view the children both directly and through the tapes. This gives the potential teachers a better idea of the children in differnt situations. Also, this experience exposes the teacher to the different teaching aids and techniques. This I think is very important in the training of a well-educated teacher."

"I personally felt it made the course more interesting to see the children through both means."

"In summation, I feel that nothing can beat the actual classroom observational experience. I feel that the opportunity that our class had of seeing several videotapes helped us to appreciate more our actual classroom observations. There was an intangible quality that was experienced in the classroom that I never felt while watching the tapes."

"The observational sequence which I experienced really didn't matter much to me. What I thought to be better is a sequence in which the tapes or direct observation were given in the sequence in which they happened. In other words, if the tape of a certain activity was on one day, the next tape or observation that we see should be of an event happening sometime after that, etc., so that we can see the change in behavior and the progress children have made over the period. From what I gather, the tapes we saw were taken before our direct observation and shown after direct observation, so, I feel we should have seen tape observation before direct and in a sequence in which the events occurred."

Summary of Evaluations

In general observation by means of videotape was favored for its ability to:

1. provide a common experience for all observers.
2. provide immediate discussion and answers to questions.
3. provide close-ups of a child and to focus on facial expressions, posture, and gestures which help to gain insight about the child.
4. permit re-runs of a situation for either clarification of a point or to pick something missed the first time.
5. provide an opportunity to see both the beginning and end of an activity.
6. allow the student to take notes freely and to react to child behavior without feeling self-conscious or guilty.
7. make the concept of the "teachable moment"come to life.
8. offer opportunities to observe children in a wide variety of situations.
9. provide an opportunity for students to make up observations missed due to illness, etc.
10. provide the necessary background of experience for objective study of children.
11. focus on significant behavior.

Direct observation was favored for its ability to:

1. give students the feeling of a real classroom atmosphere.
2. permit students to select what they want to observe.
3. make it possible for students to note changes in a child's behavior from one week to the next.
4. show how children react to different teachers.

5. give a realistic picture of children's physical sizes.
6. provide more opportunities for one to concentrate on a particular child.
7. provide a more personal relationship with children.
8. give the observer an opportunity to occasionally work along with children.
9. help the student to see a particular activity within the context of the entire day's work.
10. give students an opportunity to see the elements of a situation that precipitate a certain type of behavior.
11. make it possible for students to walk around the room, when children are not there, to examine the kind of work they do.

Chapter V

Summary and Recommendations

This study attempted to determine whether or not (1) guided viewing of selected classroom behavior recorded on videotape will not only provide a common observational experience for all students in a given experimental group but will also improve the effectiveness of instruction and increase the observational acuity of the students, (2) a combination of large-screen viewing and direct classroom observations will be superior to the present method of direct classroom observation, and (3) the televiewing of videotapes prior to direct classroom observations will be superior to the televiewing of videotapes subsequent to classroom observation for the development of observational skills.

Of the various measures used to compare the observer groups the only one which identified any significant differences was the comparison of student observer reactions with children's responses to sociograms used during the experiment. The results of this comparison failed to support the third experimental hypothesis listed above but, instead, showed that direct observation followed by videotaped observation produced more agreement between students and children than did the sequence of videotapes followed by direct observation. Comparisons of the observer group also failed to support the first two experimental hypotheses since results of the Student-Teacher Agreement form, the Semantic Differential, the Child Development Tests, and two discipline case studies failed to produce any significant differences between the groups.

A sampling of observation reports of the DO-DO and VT-VT groups suggested that students observing by videotape can identify important personality clues and role behavior by means of tape observation. A comparison of these samplings with the personality profiles of a group of seven children obtained on the Children's Personality Questionnaire showed no significant differences in identification of personality traits between the group experiencing direct classroom observation and the group having videotaped observation only.

Student evaluations, in general, supported the particular type of observation and observational sequence that each had experienced. Most students having both direct and videotaped observation expressed the opinion that each complemented the other and that a combination of the two should be provided in the future. The VT-VT group thought there was great value in videotape observation but felt they would have gained more by having both videotape and direct observation. On the other hand there was some feeling on the part of the DO-DO group that they were "fortunate" in having the entire semester for their pattern of observation.

Recommendations

After having worked with the students participating in this experimental study plus the current group of 250 sophomores, who have had both types of observation, it is the writer's opinion that a combination of videotape and direct observation should be continued in the future and that videotape observation should be preceded by some direct visitation within the classroom to:

1. introduce students to the physical plant, and especially the environment in which the children are to be videotaped, i.e., classroom, music room, art room, etc.
2. introduce students to the teacher who in turn, will provide them with some background about the children, types of educational

experiences being offered, samples of individual work, testing program, materials of instruction, etc.

3. give students an opportunity to become acquainted with children and to learn to identify them by names.

The writer also recommends that, rather than dividing the observation period into a pattern of direct followed by videotape, or vice versa, that differing, more flexible, patterns be tested. The opportunity for instructor and students to observe the same situation and then to follow it immediately with discussion and questions seems too valuable to lose by an observational pattern which arbitrarily separates the two types of experiences at some mid-point in the semester. This writer was keenly aware of the importance of the common observational experience for an entire group when discussions became increasingly difficult to focus after the VT-DO section moved into direct observation. A combination of videotapes, direct observation, and closed circuit television might solve the difficulties encountered when instructor and students are seeing different things. Such experimentation might also show that the observational sequence is not the key factor but what one does with either the tapes or direct observation or a combination of the two is much more important than the sequence variable.

As the writer worked with the videotapes she became aware of the fact that their utilization not only offers possibilities for effective instruction but also shows promise of making more efficient use of instructor time. Carefully planned videotapes can be developed to supplement various parts of a course syllabus, thus providing for both continuity of learning and integration of theory and practice. Experimental studies in this area should be of value.

One of the most promising uses of videotapes was revealed when the camera was able to focus at close range upon the behavior of several emotionally disturbed children. One such situation was used successfully with the parents of one of the children in a case conference. This accomplished more than any previous attempt to sensitize the parents to the child's need for help. Further study needs to be made of the possible use of this medium in the education of both teachers and parents in the problems and behavior of emotionally disturbed children.

Another valuable use suggested itself when the teachers of the group of children employed in the study viewed the results of each taping. They invariably commented upon their teaching techniques and suggested the use of tapes for personal evaluation of instruction. Experimental studies here should prove most useful.

In the past few months the videotapes developed for this study have been used with classes in specific curriculum subject areas and with classes in supervision. Since the tapes were developed to concentrate specifically on children's behavior these uses of the tapes highlighted the need for a series of tapes in which experienced teachers demonstrate different teaching strategies and another series in which student teachers are taped in a variety of situations. The latter might use the "critical incident" approach to the problem of teaching.

Such tapes could then be used with student teachers and supervisors, each for a different purpose.

Some of the difficulties experienced during this study were related to problems of either too much sound or too little, interference with the classroom activities while taping, lack of space for the camera to move about freely, ventilation, lighting, and having everything "set to go" when a situation worth taping presented itself. These problems could be alleviated by a properly designed and well equipped room in which much of the taping of classroom situations could be accomplished. It seems to this writer that a college, wishing to experiment with either videotape or closed circuit television, needs two classrooms in which provisions have been made for (1) sound proofing, (2) hidden cameras, (3) automatic controls which the teacher can switch on and off as he identifies an incident worth taping and (4) hidden microphones which will pick up comments from any part of the room.

One of these rooms could be used on a temporary basis moving groups back and forth for special tapings. The other might become a more permanent home for a group of children for an entire semester or year so that a series of tapes could be made, if desired. The rooms should, of course, be constructed to accomodate to any age level, K - 16.

Portable equipment is also necessary in order to tape student teachers at work in the various classrooms throughout the area which the College or University serves. In addition, such equipment would make it possible to tape classroom groups of children from every type of community and from every level of ability--mentally retarded, orthopedically handicapped, slow learners, average and gifted.

Conclusion.

The results of this study indicate that the utilization of videotapes in teaching has great potential for helping the user to accomplish a variety of purposes. Specifically, as far as this experiment is concerned, the fact

that there were no significant differences (except in the student-child measure) between the VT-VT group and the DO-DO, DO-VT, and VT-DO groups in the development of observational acuity suggests that, with more careful planning and with some modification of the pattern of observation, a combination of videotape and direct observation should prove to be superior to present methods of observation and should result in more effective instruction and more efficient use of both instructor and student time.

Appendix A

PANEL OF JUDGES

OUTLINE FOR VIEWING VIDEOTAPES

Directions: Look at the tape and list everything you can that you think students might be able to see in relation to the physical and psychological environment, the behavior of the children and teacher, and the learning activity/ies. Use the headings and sub-headings below for more specific guidance.

- I. Psychological Environment
  - A. Teacher
    - 1. Relationship with children
    - 2. Guidance of learning activities--ways of encouraging and supporting children
    - 3. Classroom climate (democratic, authoritarian, laissez-faire)
    - 4. Disciplinary or control measures used
  - B. Children
    - 1. Attitude towards teacher
    - 2. Relationships with peers
- II. Physical Environment
  - A. Furniture--type and arrangement
  - B. Seating of children
  - C. Bulletin Boards and Interest Corners
  - D. Instructional Aids
  - E. Space and Freedom and Movement
- III. Children--Physical Characteristics
  - A. Physical Types
  - B. Racial Types
  - C. Muscular Coordination--Physical dexterity
  - D. Skills being developed
  - E. Signs of energy, fatique, apathy, physical problems, etc.
  - F. Characteristics Typical of the age level (missing teeth of the sevens, restlessness, etc.)
- IV. Social-Emotional
  - A. Personality types
  - B. Ways in which children seek to interact with others
  - C. Emotional behavior (enthusiasm, fear, anger, etc.)
  - D. Behavior showing security and self-confidence
  - E. Cooperative, responsible behavior.
  - F. Signs of independence
  - G. Signs of dependency
- V. Intellectual
  - A. Motivation
  - B. Lack of motivation
  - C. Language ability
  - D. Ability to think critically or creatively
  - E. Problem-solving techniques
  - F. Ability to deal with abstract symbols
  - G. Attention and concentration span
  - H. Ability to follow directions
  - I. Variations in work habits
  - J. Creative use of materials

Appendix B

QUESTIONNAIRE
ED. 220

If a sociogram were administered to the fifth grade children whom we have been observing how well could you predict the results? Try yourself and we'll check with Mr. Smith and see how correct we are.

1. Which three boys do you think would receive the most votes as the "person I'd like most to sit next to?" List in the order in which you think the votes would be cast.
   a. highest ____________________
   b. next highest ________________
   c. next highest ________________

2. Which three boys do you think would receive the least number of votes?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

3. Which three girls do you think would receive the highest number of votes?
   a. highest ____________________
   b. next highest ________________
   c. next highest ________________

4. Which three girls do you think would receive the least number of votes?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

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5. Which three boys do you think would receive the highest number of votes as "someone with whom I would like to work on a committee"?
   a. highest ____________________
   b. next highest ________________
   c. next highest ________________

6. Which three boys do you think would receive the lowest number of votes for this question?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

7. Which three girls would receive the highest number of votes for this question?
   a. highest ____________________
   b. next highest ________________
   c. next highest ________________

Appendix B continued

8. Which three girls would receive the lowest number of votes for this question?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

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9. Which three boys do you think would receive the highest number of votes to represent the class in an interview with the governor?
   a. highest ___________________
   b. next highest ______________
   c. next highest ______________

10. Which three boys would receive the least number of votes?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

11. Which three girls would receive the highest number of votes for this question?
   a. highest ___________________
   b. next highest ______________
   c. next highest ______________

12. Which three girls would receive the least number of votes for this question?
   a. lowest ____________________
   b. next lowest ________________
   c. next lowest ________________

— — — — — —

In summing up the total results of the sociogram which children do you think would have the greatest number of votes on all three questions?

	BOYS	**GIRLS**
a. highest	________________	________________________
b. next highest	______________	________________________
c. next highest	______________	________________________

Which children would have the least number of votes when adding the total on all three questions?

	BOYS	**GIRLS**
a. lowest	________________	________________________
b. next lowest	______________	________________________
c. next lowest	______________	________________________

Name:
Section:
Date:

Appendix C-1

TEST IN CHILD DEVELOPMENT

A

1. In describing stages of growth and development it is more correct to say
   a. the life span can be divided into separate distinct growth periods.
   b. the points at which one stage of development ends and another begins tend to overlap and merge.
   c. the point at which one stage of growth ends and another begins is discernible to the trained observer.

2. When psychologists and educators speak of maturation they are referring to
   a. an inner growth process not controlled by environment.
   b. the development of the individual as a result of interaction with his environment.
   c. the child's learning the mature behavior which seems desirable for his particular age level.
   d. the growth pattern of a child's psychological development.

3. Which one of the following best defines the principle of differentiatrion in growth?
   a. each individual has his own unique pattern of physical growth.
   b. growth of the individual is affected by the environmental forces to which he is exposed.
   c. growth takes place in both cephalocaudal and proximo-distal directions.
   d. parts of the body, physical skills, intellectual, and emotional responses become progressively more unique and distinct.

4. The phrase "Growth is continuous but"- needs which group of words below to complete its meaning when describing general characteristics of growth?
   a. affected by environment.
   b. can be impeded by illness.
   c. differs depending upon the culture.
   d. not always steady.

5. When we speak of cross-sectional studies of growth we are referring to
   a. the comparison and study of large groups of children and the isolation of characteristics which seem to appear at different age levels.
   b. the study of individual children over a period of years so that patterns of growth are observed and charted.
   c. the use of psychological testing to discover causes of behavior
   d. observation of children at stated intervals and in a variety of activities.

6. Readiness is a term used by educators to designate
   a. the beginning stages of learning to read.
   b. a willingness to try to understand what the teacher is trying to teach.

c. that the child has the background necessary for a particular learning experience
d. that materials and equipment necessary for a lesson are ready and on hand for use.

7. Which two of the following statements are in the wrong position, thus upsetting the correct order of the events?
   Six stages in the development of prehensory behavior are:
   a. The baby looks at a cube.
   b. The baby approaches the cube.
   c. The baby grasps the cube with his fingertips.
   d. The baby graps the cube in the palm of his hand.
   e. The baby picks up the cube using his thumb in opposition to his forefinger.
   f. The baby releases the cube.

8. Which describes the cephalo-caudal direction of growth?
   a. growth which takes place from the trunk outward, from shoulders to fingertips, from hips to toes.
   b. growth which takes place downward in a head to foot direction.
   c. the development of large muscle coordination before that of finer muscles.

9. Handedness (right or left hand dominance) is generally well established by age
   a. four
   b. five
   c. six
   d. seven

10. When speaking of longitudinal studies we are referring to those studies which
    a. follow the development of selected individuals over a long period of time.
    b. follow the development of selected individuals for a short period of time.
    c. deal with all the classes in a school system ranging from nursery school through high school.

11. Maslow's theory of human needs suggests that basic needs
    a. are unrelated causes of behavior.
    b. are mutually exclusive in that one may extinguish others at times.
    c. are never reversed in order of prepotency.
    d. are the organizing center of human behavior.

12. The term "life-space" refers to
    a. the length of time a child has lived.
    b. the spacing between spurts of growth.
    c. the child's cultural and physical environment.
    d. the space of time in which it takes a child to reach maturity.

13. During the middle years (nine to twelve) the boys will, in general
    a. catch up with the girls in physical maturity.
    b. fall behind the girls in physical growth.
    c. surpass the girls in height and weight.
    d. surpass the girls in over-all physical growth.

14. Which of the following is the most important socializing agency for the development of sex appropriate behavior?
    a. home
    b. school
    c. peer groups
    d. community

15. Separation of the sexes in group membership appears at about age
    a. six
    b. eight
    c. ten
    d. twelve

16. Among all organisms from the amoeba to human the basic motivation is
    a. extrinsic
    b. spurious
    c. intrinsic
    d. altruistic

17. The highest level of human learning is
    a. the development of understanding.
    b. habit formation.
    c. mastery of skills.
    d. adequate response to a stimulus.

18. What is the most characteristic form of learning which the infant uses?
    a. incidental learning.
    b. imitation
    c. trial and error
    d. problem solving

19. "Hearing acuity" refers to an individual's ability to
    a. hear the normal sounds of his environment.
    b. hear sounds which the average person cannot hear.
    c. hear high, piercing sounds without being affected by them.
    d. hear the differences in pitch, tone, volume, distance, and length of a sound.
    e. sense or be aware of the vibratory waves that make the sound

20. Which statement is least characteristic of purposeful learning?
    a. It requires goal setting.
    b. It requires extrinsic motivation.
    c. It is the most efficient means of learning.
    d. it results in a change of behavior.
    e. It may or may not stem from teacher-pupil planning.

21. Which phrase below is most appropriate in describing the average two-year-old child when coloring or painting?
    a. finds it easier to make vertical strokes than horizontal.
    b. finds it easier to make horizontal strokes than vertical.
    c. can now make both horizontal and vertical strokes.

22. The average three-year-old is characterized by his
    a. negativism
    b. social amenability
    c. unpredictable behavior.

23. The average three-year-old's intellectual development has progressed to the point where
    a. the idea of "three" plays an important part in his ability to see relationships.
    b. he can count to three.
    c. he can combine three cubes to make a bridge.
    d. he can barter and trade one toy for another.

24. When painting a picture the average three-year-old
    a. now uses horizontal lines rather than vertical lines.
    b. confines his strokes to vertical movement.
    c. combines both vertical and horizontal lines.

25. When the average four-year-old paints he
    a. starts out with a definite idea in mind.
    b. he does not attach any specific title to his painting.
    c. the subject of his painting becomes definite by the time he has completed it.

26. The average four-year-old is best characterized by which of the following phrases?
    a. his willingness to conform.
    b. his tendency to go out of bounds in his behavior.
    c. his verbosity.
    d. his love of dramatic play.

27. The developmental changes which occur in children between the ages of five to ten can best be described as
    a. dramatic
    b. evolving slowly and steadly
    c. unpredictable

28. Children generally master the skill of skipping by the time they are
    a. five
    b. six
    c. seven
    d. eight.

29. When painting or working with clay the five-year-old generally
    a. imitates what others around him do.
    b. wants the teacher to tell him what to do.
    c. works without thinking about the end product.
    d. works with a definite idea in mind.

30. Which of the terms below best suits the average five-year-old?

    a. sociable
    b. mainly self-centered
    c. uncooperative
    d. boastful

31. Five-year-olds prefer
    a. fairy-tales.
    b. stories related to the "here and now".
    c. stories about boys and girls in other lands.
    d. simple biographies.

32. By age six the child's eye and hand preferences will be
    a. nearing stabilization.
    b. well-established.
    c. yet undetermined.

33. One of the most common characteristics of the six-year-old is
    a. his desire to conform to regulations.
    b. his restless, active behavior.
    c. his cooperative, responsible behavior.
    d. his ability to wait his turn.

34. Which is most important to children in late childhood?
    a. the approval of their parents and teachers.
    b. the development of strength, vigor, and manual skills.
    c. the feeling of gaining psychological independence,
    d. freedom to play with whomever they choose.

35. Lack of hearing acuity may cause failure to develop the skill of reading because
    a. the child cannot hear the teacher's directions.
    b. the child has difficulty hearing the other children read.
    c. the child has been unable to hear speech sounds correctly.
    d. the child's hearing difficulty has limited his conceptual experiences.

36. Which is an example of proximo-distal growth?
    a. the child learns to sit before he creeps.
    b. the child's hearing acuity develops more rapidly than his visual acuity
    c. the child can throw a ball before he kicks it.
    d. the child can grasp a cube before he can stand.

37. Which of the following is an illustration of the growth principle termed "differentiation?"
    a. each child requires a different kind of handling because of his unique characteristics.
    b. Some children develop good large muscle coordination sooner than do other children.
    c. the arm buds appear first on the embryo.
    d. each child differs from others in physical structure according to his own biological inheritance.

38. In discussion the relationship between physical and mental growth one can correctly say
    a. there is a high correlation between mental and physical growth.
    b. there is a low positive correlation between mental and physical growth.
    c. there is a negative correlation between mental and physical growth.
    d. the relationship between mental and physical growth is greatest during adolescence.

39. In discussing the uniqueness of each child's pattern in the process of development it is important to point out that
    a. an individual child may mature at different rates in various aspects of his growth.
    b. new behavior patterns grow out of old patterns.
    c. each new achievement has its place in the growth sequence.
    d. all children go through essentially the same sequential patterns of growth.

40. In explaining the meaning of the term "the norm" which sentence would be best?
    a. We are speaking of a universal occurrence of a trait at a particular age.
    b. All children will possess certain traits in common.
    c. There are sequences of growth which are predictable for all children.
    d. Large numbers of children are alike in a particular trait at a given age.

41. If a teacher wishes to further motivate a child for learning, one of the most fruitful methods she could use would be to
    a. give him rewards such as gold stars.
    b. make certain he is aware of his own progress.
    c. give him special privileges for doing good work.
    d. display his work where others can see it.

42. Of the developmental patterns listed below, which may cause the greatest problems for the child within the school environment?
    a. physical acceleration coupled with mental retardation.
    b. uneven growth of parts of the body.
    c. oversized growth.
    d. undersized growth.

43. If you wanted to discover which children in your group are ready for more formal teaching, which of the following procedures would help you most?
    a. take time samplings of each child's use of language.
    b. watch the children to see if they are interested in books.
    c. note which children make attempts to write.
    d. observe and jot down anecdotes of children's behavior in all types of school situations.

44. The teacher of the five-year-olds generally starts the day with free activity because
    a. this is a way of getting each child involved immediately in something of interest to him.
    b. this is a way to calm children down for quieter, more directed activities.
    c. after a good night's sleep the child is ready for something active.
    d. five-year-olds need to feel they are making their own decisions.

45. When the five-year-olds are having a dispute it is better for the parent or teacher to
    a. help them think through their problem.
    b. separate them for the time being.
    c. deprive them of the activity or toy which is causing the dispute.
    d. remain in the background while they try to solve their problem.

46. The teacher of the five-year-olds avoids an over emphasis on correct speech because
    a. at this age such an emphasis may cause stuttering.
    b. formal teaching has no place at the kindergarten level.
    c. formal teaching will cause the child to withdraw and make no attempt to communicate.
    d. the development of spontaneous speech is more important at this level.

47. Because of their stage of physical development, the teacher of six-year-olds can expect them to
    a. become easily frustrated when using fine motor skills.
    b. resist work requiring close eye-hand coordination.
    c. use a pencil, scissors, or other tools with ease.
    d. need very little assistance in manipulating tools.

48. A six-year-old is particularly susceptible to contagious disease because
    a. he now has much more contact with groups than he has had previously.
    b. his uneven physical growth causes much physical strain.
    c. he has not yet learned correct health habits such as covering his mouth when he sneezes.

49. The first grade children at Jonestown School are using a variety of materials such as discs, buttons, and sticks in learning to count. The soundest justification for this practice is that:
    a. such materials provide novelty for the young child.
    b. the children are learning to recognize objects as well as to count.

c. such materials have important implications for reading readiness.
d. learning is essentially sensory for your children.
e. it prevents children from counting on their fingers.

50. Miss Yamashita has twenty-four children in her second-grade classroom, three of whom write with their left hands. Which one of the following would be the best way for Miss Yamashita to deal with these children?
a. make sure that they are using a comfortable writing position and allow them to continue using their left hands.
b. give them special, small group training in writing with their right hands.
c. seat these children next to right-handed children so they can copy their method of writing.
d. encourage them to try to use their right hand.

51. Miss Takata had planned to teach the game of kickball to her eight-year-olds. However, she found wide differences in the children's sense of timing and in their ability to balance, judge the direction and speed of the ball, their ability to kick the ball, and their ability to run fast enough to reach a base. In order to do what is best for these children Miss Takata should
a. postpone the game of kickball until fourth grade.
b. teach the game to only those who can play it.
c. wait a semester, then introduce it again.
d. introduce games and exercises which will help children to develop the skills needed for kickball.

52. Children from nine to twelve need discipline because
a. they haven't reached the age of reasoning.
b. underneath their veneer of rebeliousness they are confused and uncertain.
c. they do not really want the freedom they seem to demand.
d. they haven't yet learned all the rules of society.

53. Children of "later childhood years" (nines, tens, elevens) are said to be entering the healthiest period of their lives because
a. their team games give them plenty of exercise.
b. they sleep about ten to eleven hours per day.
c. they have learned to balance their diets.
d. they have generally been exposed to most childhood diseases.

54. Integration of behavior is achieved when
a. an individual conforms to the expectations of his social world.
b. the various aspects of an individual's development (i.e., social, emotional, physical, intellectual) are brought into harmony with each other.
c. human beings recognize each other's worth and accept one another accordingly.

55. Miss Tom's fifth graders were learning about the different locations, the people, the types of topography, climate, rainfall, and prevailing winds which affect the countries of the Pacific Rim. This is an illustration of which of the following:
   a. fifth graders are continuing the process of intellectual differentiation through this study.
   b. fifth graders like to study about other countries.
   c. geography is a common subject at the fifth grade level.
   d. children should learn about those countries nearest to them before studying others.

56. When we say that a "child grows as a unit" we mean
   a. as the child grows physically he also grows socially, emotionally, and intellectually.
   b. he grows continuously in all parts of his body.
   c. as the baby develops locomation skill while crawling he also learns by manipulating objects.

57. Dr. Arnold Gesell's statement, "The child is his own best norm" probably means
   a. the child is the best judge of his progress.
   b. the child's pattern of growth is the truest index to his individuality.
   c. the child's sex will be predictive of his growth pattern.
   d. that whatever is good for other children may not necessarily be good for a particular child.

58. A baby is sometimes said not to be "full-born" until almost four weeks of age. This refers to the fact that
   a. he does not recognize a familiar face before this time.
   b. he can do nothing but eat, sleep, and cry up to this time.
   c. his various physiological functions such as breathing and body temperature are irregular and uncoordinated.
   d. this is a period when the baby must have conditions which simulate the warmth and nourishment he received during the prenatal stage.

59. The span of one year between the two and three-year-old level has sometimes been identified as the "Terrible Twos" because
   a. the two-year-old continues to think of everything in terms of "mine."
   b. the child at this age has discovered that life offers many alternatives.
   c. the child at this age often makes the wrong choice.
   d. the child at this age is just becoming aware of others than himself.

60. When Dr. Arnold Gesell made the statement that "the growth process is a paradoxical mixture of creation and of perpetuation", he probably meant that
   a. the human species is perpetuated by the process of reproduction.
   b. the creative urge in an individual causes growth to take place.
   c. all growth is based upon previous growth.

61. In discussion the topic of "left-handedness" or "right-handedness," the following causes of hand preference were suggested by members of a

panel. One of these is the position most commonly accepted today. Which is it?

a. hand preference is inherited.
b. hand preference can be established through early training.
c. hand preference is just a matter of chance.
d. hand preference is a matter of brain dominance.
e. the causes of hand preference remain undertermined.

62. When a music specialist says that there is an important relationship between hearing acuity and musical ability he is thinking of

a. the child's ability to hear the underlying melody of a musical number.
b. the child's ability to learn songs by rote.
c. the child's ability to feel the rhythm of a song.
d. the child's ability to differentiate the various musical patterns of a composition.

63. When a teacher of five-year-olds provides areas for playing house, building with blocks, playing with doctors' and nurses' kits, etc., she is.

a. trying to make the children happy at school.
b. trying to meet the children's need for activity.
c. giving them opportunities to develop greater understanding of their environment.
d. giving them a chance to imitate the activities of adults.

64. Suzy Smith, a first-grade child, comes from a home of low socio-economic status. Her speech is ungrammatical and her vocabulary is limited. Rose Brown, the mayor's daughter, who is in the same class, speaks correctly and has quite an extensive vocabulary. Which of the following statements most likely explains this circumstance:

a. Suzy has a lower I.Q. than Rose.
b. Each child is speaking the language learned in the home.
c. Rose is more sensitive to oral language.
d. Rose has traveled more than Suzy.
e. Suzy's parents are unaware of the values of proper speech.

65. When Miss Nakama was discussing her first grade curriculum with the principal of the school she stressed the need to group the children in small groups for teaching purposes and the need to provide different levels of learning materials for these various groups and individuals. Probably uppermost in her mind was

a. the different socio-economic backgrounds of her children.
b. the maturational differences of the children.
c. the role which variety plays in motivating children.
d. the differences in interests which are apparent in any group of children.

66. Before Miss Uyehara introduced fractions she tested her children's mastery of the basic addition, subtraction, multiplication, and division combinations. She was trying to discover

a. the extent to which her children had mastered the subject matter she taught.
b. which children were below average, average, and above average in arithmetical skills.
c. the children's readiness for a new learning activity.
d. whether or not she could now forget the basic combinations and move on to a higher level in arithmetic.

67. Which principle of learning listed below is best illustrated when the teacher involves children in setting up goals, making and carrying out plans, and evaluating the results of their work?
a. the child learns when he is ready to learn.
b. the child learns what he perceives from his own background of experience as important for him to learn.
c. the child learns to do by "doing."
d. learning dependes upon identification and acceptance of goals by the learner.
e. children want to learn.

68. One of the most important reasons for providing a variety of instructional materials and concrete aids for classroom teaching is that
a. this makes learning more attractive to children.
b. such materials provide sensory experiences in relation to what is to be learned.
c. experiences with these materials provide the basis for the development of concepts.
d. children are more motivated when there is a variety of materials for their use.

69. The best index to a child's personality and social maturity is
a. his choice of books for independent reading.
b. his play life.
c. the friends with whom he associates.
d. his behavior in a committee or group project.

70. When a teacher gathers information about a child in relation to his skeletal age, the age at which he began walking and talking, his mental age, his achievement scores, his social and emotional behavior, and his physical development, she is trying to determine
a. whether or not he should be promoted to the next grade.
b. whether or not his maturational pattern makes his school experience difficult or too easy for him.
c. whether or not he is performing up to his ability.

71. As children have opportunities to explore and to have experiences with many of the people and objects within their environment there is greater possibility that
a. they will know their immediate environment better.
b. both intellectual differentiation and integration will have an opportunity to develop
c. their vocabularies will be enlarged.
d. their sensory development will be enhanced.

72. The most important idea for the teacher behind the concept of "developmental tasks" is
    a. unless children learn responsibilities as they grow they will become misfits in society.
    b. children may remain too long at one stage of development unless their environment is conducive to growth.
    c. there are things an individual must learn at each stage of development in order to be happy and successful at the next stage.
    d. ther are "teachable moments" which, if not capitalized upon, may either cause failure or a lack of desire to proceed to more complex tasks.

73. In studying a child's background of heredity and environment the teacher's chief concern is
    a. to find the causes behind a child's behavior.
    b. to find the level at which she needs to work with the child.
    c. to find ways of working with the parents on the child's problem.
    d. to find out whether the child needs special help from the welfare department.
    e. to find out what type of neighborhood and family he comes from.

74. If a three-months-old infant, who seems to be making normal progress in general, fails to vocalize and experiment with sounds,
    a. he probably should be checked by an otologist for hearing difficulty.
    b. probably nobody takes the time to talk to him.
    c. he probably has a physical defect which impedes the development of speech.
    d. possibly his needs are being satisfied too quickly.

75. Of the following which might be considered most serious in a four-year-old?
    a. his desire to play alone with his own toys.
    b. his fighting over toys with his classmates.
    c. his tall tales.
    d. his bragging.
    e. his tattling.
    f. his reaction to adults with such terms as "you stinker!"

76. If a five-year-old eventually becomes restless and leaves a small group activity it is most likely an indication that
    a. the teacher is not motivating the children well enough.
    b. the child is trying to meet a basic need.
    c. the child is immature for this age level.
    d. the child has had very little disciplinary training at home.

77. Miss Sakata became concerned about a child in her first-grade class who was smaller than the other children, seemed poorly coordinated, had a short attention span, and was unable to exercise any form of self-control. She also collected the following information from a standardized test:

    Verbal age--6 yrs-5 mos.
    Perceptual Age--5 yrs-7 mos.
    Quantitative Age--4 yrs-5 mos.
    Motor age--5 yrs-5 mos.
    Space age--4 yrs-3 mos.
    Total age--5 yrs-3 mos.

All of the above information suggests that
a. the child should be retained in the first grade another year.
b. the child may not be ready for the first grade.
c. the child should be dropped from school and re-entered at a later date.
d. the child is showing natural behavior and achievement at the first grade level.

78. Yvonne, a student teacher, discovered that some of her second-grade children used concrete aids for learning the "new math" while others seemed to use them very little, if at all. She concluded that
a. some children felt it too babyish to use such aids.
b. this was an indication of the wide range of differences in mathematical ability in the class.
c. some children were ashamed to let others see them use such aids.
d. some children could not see the relationship between the use of the aids and their arithmetic work.

79. When elementary school children learn to ride a bicycle somewhere around the late primary years, they are illustrating which type of growth?
a. proximo-distal
b. cephalo-caudal
c. proximo-distal and cephalo-caudal

80. Nine is sometimes spoken of as the age when a child may turn towards delinquency. The implication of this for parents and teachers is
a. he should be given definite supervision during his free time.
b. he must be taught proper respect for authority.
c. he should be introduced to books which have an adventurous plot with a moral.
d. he should be given freedom commensurate with his ability to handle it.

81. Which one of the areas below is just beginning to be recognized as having an important relationship to mental health?
a. meeting the basic needs of an individual for physical well being, love, affection, belonging, and achievement.
b. the development of the individual's intelligence.
c. the individual's need for a broad, liberal education.
d. the assessment and guidance of the growth of creative ability.

82. In our society the creative individual has been generally looked upon as:
a. a valuable asset to our culture.
b. an "off-beat" type of artist or musician.
c. one who should be especially honored.
d. only "one in a million."

83. The school's function today is mainly geared to
a. the teaching of the basic skills.
b. preparing the child for vocational success

c. the development of intellectual ability.
d. the development of all children socially, emotionally, physically and intellectually.

84. Which of the following is more likely to develop into a creative individual?
a. the highly intelligent child.
b. the child who has special talent.
c. the child who prefers to explore and learn through problem-solving activities.
d. the child who dislikes conventions and refuses to conform to regulations.

85. One of the outstanding characteristics of the eight-year-old which is likely to be overlooked as an important indication of his thrust for intellectual independence is his
a. growing interest in far-away places.
b. his cooperation and friendliness with other children.
c. his tendency to experiment with language.
d. his love for superstition and rituals.
e. his tendency to argue with both adults and children.

86. Because of the eight-year-old's improved muscular coordination he can now be introduced to such activities as
a. basketball
b. softball
c. volleyball
d. competitive swimming

87. The eight-year-old is considered intellectually mature enough to study about
a. government
b. ancient history
c. geography of other countries
d. early prehistoric animals

88. During the later elementary years belonging to the peer group is so important that a fringer or isolate is likely to
a. attempt to buy his acceptance through bribery.
b. resort to tattling on those who do not accept him.
c. try to interfere with the gang's activities.
d. completely ignore the adults in his life.

89. The rate of physical growth during the later elementary school years (fourth through sixth grades) is generally
a. rapid
b. slow and steady
c. erratic
d. unpredictable.

90. Emotionally, ten-year-olds can be described as
    a. having a generally happy outlook on life.
    b. being in a state of disequilibrium.
    c. regressing to more immature emotional behavior.
    d. easily upset if not praised for their work.

91. Ten-year-olds take themselves seriously. This often results in their
    a. setting too high standards for themselves.
    b. attempt to free themselves of any dependence upon adults.
    c. fluctuation between independence and dependence upon adults.
    d. resistance to taking on responsibilities not initiated by themselves or their peers.

92. The later childhood years (nines, tens, elevens) are often referred to as the period of "competitive socialization" because of
    a. the emphasis these children place on following the rules of the game.
    b. the ascendancy of the competitive urge over the desire to socialize.
    c. the competition for friendships which takes place during these years.
    d. the emergence of both the cooperative group spirit and the desire to be "the winner."

93. At about age ten children's play interests seem to
    a. decrease in variety
    b. increase in variety
    c. be more related to individual hobbies
    d. be more spontaneous and resourceful
    e. be more active and adventurous in nature.

94. At about age eleven girls' physical growth as compared to boys'
    a. tends to fall behind.
    b. tends to spurt ahead.
    c. tends to parallel that of boys.

95. The teacher of the nines to elevens can increasingly involve the children in cooperative classroom procedures because
    a. the are avid for learning and like to discuss what they learn.
    b. they are old enough to take on more responsibility.
    c. they are developing more ability to reason and they like to examine each other's ideas.
    d. they are developing a "community conscience."

96. Children of later childhood (nines to elevens) tend to prefer which of the following types of stories?
    a. animal, folk and fairy tales.
    b. adventure, nature, history and travel.
    c. fanciful stories such as Mary Poppins.
    d. stories of Cowboys and Indians.

97. The term "self-concept" is used to designate
    a. how a child feels about his role in the family.
    b. how the child feels about his body.

c. how the child feels about his school experience.
d. how the child feels about himself and his relationships to others

98. One of the most important developmental tasks of middle childhood is
a. learning how to get along with others.
b. assuming more adult responsibility.
c. adjusting to a maturing body.
d. developing a conscience.

99. The preadolescent spurt of growth creates the need for
a. additional understanding and support of adults.
b. more freedom of choice in following regulations.
c. providing more boy-girl activities in school or clubs.
d. new responsibilities which match children's growth.

100. One factor which helps to make a tentative identification of a mentally retarded child is
a. his withdrawal behavior.
b. his limited vocabulary.
c. his choice of younger children for playmates.
d. his short attention span.

Appendix C-2

TEST IN CHILD DEVELOPMENT

Form B.

1. When stating that the child proceeds through various stages of growth and development a writer is referring to the fact that
   a. a child proceeds through clearly defined physical stages of growth at specified chronological age levels.
   b. a child proceeds through clearly defined psychological stages of growth and development beginning with the oral period and ending with the latency period.
   c. a child proceeds through clearly discernible stages of physical, social, emotional, and intellectual development.
   d. a child proceeds through stages of personality development (social, emotional, physical, intellectual) which tend to overlap and merge.

2. Which of the items below best illustrates the meaning of the psychological term "maturation"?
   a. a child exhibits the mature behavior which results of cross-sectional studies indicate to be normal for each age level.
   b. the child moves through an orderly, sequential patterned manner of growth resulting from an inner process or urge to grow.
   c. the child develops as he interacts with his environment.

3. The principle of "differentiation in growth" is best explained by which of the following:
   a. children move through an orderly, sequential pattern of development but each at his own rate.
   b. children develop different values, mores, and customs depending upon their environment.
   c. as the fetus grows various cells are differentiated to form specialized tissues and organs.
   d. the child's total development proceeds mainly from the simple to the complex, the general to the specific.

4. Which of the items below is a statement of a general principle of growth?
   a. growth is continuous but not always steady.
   b. growth is continuous but can be impeded by illness.
   c. growth is continuous but differs with each culture.
   d. growth is continuous but can be affected by the environment.

5. Cross-sectional studies in child development deal with
   a. selected groups of children from various cultural areas of the country.
   b. large numbers of children at each age level.
   c. large numbers of children from various socio-economic levels across the country.

6. "Readiness" is a psychological term referring to
   a. the child's desire to begin formal learning.
   b. the child's willingness to submit to a teacher's instruction.

   c. the kind of experiences in a child's background which prepare him for formal learning.
   d. "the teachable moment" which results from both maturation and experience.

7. One of the best indicators of a child's readiness for a new learning experience is
   a. his academic record covering his total school experience.
   b. his achievement scores as measured by standardized tests.
   c. his responses to informal, teacher-made tests.
   d. his interest, persistence, and enthusiasm for dealing with a particular topic.

8. The most important step in the development of prehensory behavior is when the infant
   a. is able to release a cube from his grasp.
   b. grasps a cube with his whole hand.
   c. grasps the cube with his fingertips.
   d. grasps the cube with his forefinger in opposition to his thumb.

9. When speaking of the cephalocaudal direction of growth a physiologist is referring to
   a. the development in control of first the large muscles, then the finer muscles.
   b. the maturation and control which progresses from head to foot.
   c. growth which proceeds from the trunk of the body outwards.

10. Hand preference generally becomes consistent between the ages of
   a. one and two.
   b. two to four.
   c. four to six.
   d. six to eight.

11. Which one of the following is an example of a longitudinal study?
   a. Dr. Gesell's studies of children from birth to adolescence.
   b. Margaret Mead's studies of children in primitive cultures.
   c. the studies of children as shown in the films "Terrible Twos and Trusting Threes" and "Frustrating Fours and Fascinating Fives."
   d. the growth charts for boys and girls developed at the University of Iowa.

12. The theory of "basic needs" is based upon the premise that
   a. learning is interrupted if a child's basic needs are not met.
   b. learning is affected adversely or favorably depending upon the degree to which the basic needs are met.
   c. learning becomes negative if the basic needs are not met.
   d. learning is stopped if the basic needs are not met.

13. When speaking of the physical, social, and psychological environment in which the child lives we are referring to his

a. home situation
b. "life-style"
c. school situation
d. "life-space"

14. In the early pre-adolescent years boys tend to
a. parallel girls in physical growth.
b. surpass girls in physical growth.
c. drop behind girls in physical growth.

15. During the middle years of childhood which one of the following has the greater influence on the development of sex appropriate behavior?
a. the girl's mother and the boy's father.
b. the school.
c. the community.
d. the peer group.

16. The most obvious separation of the sexes in their play and social groups begins at about age
a. six
b. eight.
c. ten.
d. twelve.

17. The basic motivation in all organisms from the simple amoeba to the human animal is based upon
a. hunger.
b. sex.
c. fear.
d. extrinsic factors.
e. intrinsic drives.

18. The very young child learns best through
a. trial and error.
b. imitation of others.
c. direct teaching.

19. The highest level of learning is attained when a child
a. can identify significant elements of a problem situation.
b. can gather data pertinent to the solution of a problem.
c. can organize and record information in a clear and concise manner.
d. can communicate what he has learned in an effective way.
e. can see the relationships between various elements of an experience and arrive at understandings and generalizations.

20. Purposeful learning is that learning which is based upon
a. an understanding of the teacher's goals for a lesson.
b. the child's intrinsic interest and curiosity about the world around him.
c. the child's recognition of his future vocational interests.

d. the child's immediate expressed interests.
e. the development of children's interests and the pursuit of activities to satisfy these interests.

21. Which one of the following is more difficult for the average two-year-old?
    a. building a tower of five to six cubes.
    b. painting with a vertical stroke on a large sheet of paper.
    c. arranging cubes in a horizontal row.

22. When speaking of the child's "hearing acuity" we are referring to his ability to
    a. distinguish phonetic elements in words.
    b. distinguish fine discriminations in sound.
    c. recognize the normal sounds in his environment.
    d. recognize sounds not easily distinguishable by the average person.

23. The average three-year-old's psycho-motor development makes him
    a. more socially amenable.
    b. generally unpredictable in his behavior.
    c. negativistic towards others.
    d. very responsible in carrying out little duties.

24. Three-year-olds have reached the stage of intellectual maturity where they can make a choice between
    a. two possible alternatives.
    b. three possible alternatives.
    c. four possible alternatives.
    d. five possible alternatives.

25. We could expect an average three-year-old's paintings to be composed of
    a. mainly horizontal lines and figures.
    b. mainly vertical lines and figures.
    c. both vertical and horizontal lines and figures.

26. When the average four-year-old works with paints or construction tools he
    a. starts his work with a definite plan in mind.
    b. decides what he has made after it is completed.
    c. formulates his plan as he works with the materials.

27. The four-year-old is sometimes referred to as "frustrating" because of
    a. his tendency to to out of bounds in his behavior.
    b. his
    c.
    d. his obvious thrust for independence

28. Skipping is a skill generally mastered in the
    a. preschool years.
    b. primary years.
    c. upper elementary years.

29. The five-year-old, when painting or working with clay differs from the four-year-old in that
    a. he has now reached a stage of imitation of others' work.
    b. he has a more definite idea for what he is making.
    c. he has reached an arrested stage in his development of skills.
    d. he wants specific guidance from the teacher.

30. Gesell calls five a "nodal age." This means that
    a. he is at an expansive period in his development.
    b. he is marking time.
    c. he is at a restless stage in his development.
    d. he is attempting to free himself from the dependency upon the home.

31. A teacher of five-year-olds chooses books for reading to the children which
    a. take them into the magical world of fairy tales.
    b. help to acquaint them further with their own familiar world.
    c. introduce them to children of other lands.
    d. describe for them the experiences of children of their parents' childhood days.

32. A teacher of six-year-olds will adjust working conditions for left-handed children because
    a. their hand preference is now well-established.
    b. trying to change their hand preference will create emotional instability.
    c. nobody really knows what causes hand preference.

33. Which of the following is characteristic behavior of the average six-year-old?
    a. he can be relied upon to conform to regulations.
    b. he may be most conforming one minute and very hostile and aggressive the next.
    c. he is inclined to be moody.
    d. he is apt to be argumentative.

34. Children of later childhood (nines to twelves) seek their satisfactions and approval mainly from
    a. winning the approval of their "gang."
    b. winning the approval of their parents.
    c. winning the approval of their teacher.
    d. winning the approval of the opposite sex.

35. Hearing acuity is important to the development of reading skill because
    a. hearing precedes speaking or reading.
    b. hearing directions correctly promotes success in reading.
    c. hearing speech sounds correctly is related to phonetic analysis of words.

36. Crawling before walking is an example of the
    a. proximo-distal direction of growth.
    b. growth principle in integration.
    c. cephalo-caudal direction of growth
    d. principle of the individual's unique pattern of growth.

37. When the child reaches the stage of categorizing people, animals, objects and events he is exemplifying the growth principle of
    a. differentiation.
    b. integration.
    c. uniqueness of growth.

38. Research evidence which has been collected on the correlation between physical and mental growth suggests that
    a. mental and physical growth are unrelated.
    b. mental and physical growth have a high positive correlation.
    c. the relationship between mental and physical growth seems to be highest during infancy.
    d. the relationship between mental and physical growth seems highest during the middle years of childhood.

39. In using results of normative studies parents often fail to realize that
    a. their socio-economic status may make their child different.
    b. their child may vary from the norm both above and below in different aspects of behavior.
    c. home values will have an important influence on the child's reactions.
    d. their own methods of discipline may determine the degree to which their child matches the norm.

40. If you were asked to explain the meaning of the term "the norm" to parents, which of the following phrases would be most appropriate?
    a. the standard of expectancy for a particular grade level.
    b. the typical motor, social, emotional, and intellectual behavior of a given age level.
    c. those characteristics which are common to all children.
    d. growth sequences which are common to all individuals.

41. When a teacher helps a child to keep a record of his own progress she is mainly attempting to capitalize upon his
    a. need for recognition.
    b. need for acceptance.
    c. need for approval
    d. need for a feeling of accomplishment.

42. Which one of the following might create the most severe problem for a sixth grade teacher?
    a. a child who is growing more slowly than the others.
    b. a child who is a slow learner.
    c. a child who is physically handicapped.
    d. a child who is mentally retarded and physically mature.

43. In trying to assess the readiness of your first grade children for more formal teaching, which procedure below might help you the most?
    a. administer commercial standardized readiness tests.
    b. note the children's language development.
    c. observe the children's handling of art materials and various construction tools.
    d. note the children's interest in and use of books.
    e. observe and take samplings of the children's behavior in a variety of situations.

44. The day for preschool children generally starts with a free choice of activities because
    a. young children have had very little experience in large group activities.
    b. fewer problems will arise during the day if their energy is used early.
    c. small children are impatient to explore and manipulate their environment.
    d. involving small children in activities of vital interest to them creates a favorable climate for a variety of learnings.

45. When two five-year-olds get into a fight it is better to
    a. separate them for the time being.
    b. give them a talk about getting along together.
    c. take away a privilege.
    d. give them a chance to solve their problem.

46. During sharing time the teacher notices that her five-year-olds make several speech errors. She should
    a. correct their errors as soon as they are made.
    b. plan a series of lessons to teach correct speech.
    c. teach them some speech games.
    d. give them many opportunitites to speak spontaneously.

47. A six-year-old can become easily frustrated with activities requiring finer muscular coordination because
    a. he is more awkward now due to physiological changes which are taking place.
    b. his boundless energy is best used in large muscle activities.
    c. his goals for himself exceed his capacity.

48. Because of his uneven physical growth a six-year-old is
    a. particularly susceptible to contagious disease.
    b. likely to be immature emotionally.
    c. difficult to control in a classroom situation.
    d. apt to have poor health habits.

49. The teacher of six-year-olds provides them with many concrete learning experiences because

a. learning for this age must appear to the children to be mostly play.
b. learning at this age is still essentially sensory.
c. children of this age cannot learn abstract concepts.

50. Miss Nakata discovers that she has three left-handed children in her room. The most important thing she will need to consider as she plans the school year is
a. how can she teach these children to use their right hand.
b. will she create emotional tensions if she tries to teach them to use their right hand?
c. should she just encourage them to use their right hand instead of trying to teach them directly?
d. what are apt to be the problems of the left handed children?

51. Eight-year-olds like organized games and are apt to be rather cruel towards those who cannot play the game well. For this reason it is important for the teacher to
a. supervise their games closely.
b. go over the rules of the game carefully.
c. choose the teams and captains carefully.
d. provide for games and drills that develop the skills required in the games.

52. It is important for the teacher of nines, tens, or elevens to set some limits on behavior because
a. these children are not yet capable of self-direction.
b. children of this age are more relaxed and cooperative when they are aware of thier boundaries.
c. these children do not really want the freedom which their behavior seems to demand.
d. children of this age are incapable of foreseeing the consequences of their behavior.

53. Competitive sports are kept to a minimum in the upper elementary grades because
a. elementary children are not emotionally mature enough to face the outcomes of such activities.
b. their intra-class team games give them enough experience in competion.
c. it is dangerous to place the additional emotional strain on the heart at this period of growth.
d. children of this age level have not yet learned enough about cooperative team work.

54. In discussing the matter of health as far as the nines to twelves are concerned it is correct to generalize that
a. they are entering the healthiest period of their lives.
b. they are entering a period of susceptibility to disease.
c. they are entering a period when they will be more concerned about their health than at any other time in their lives.

55. When we speak of integration of behavior we mean that
    a. an individual has developed his own unique way of responding to his environment.
    b. the various aspects of an individual's development have been brought into harmony with each other.
    c. the individual's behavior is consonant with the mores and customs of society.
    d. prejudices and feelings of superiority have been overcome.

56. The process of intellectual differentiation is best illustrated by which statement below?
    a. The child learns that four-legged animals with fur are called dogs.
    b. The child learns that some animals are domestic and some are wild.
    c. the child learns that some four-legged animals with fur are called cats.
    d. The child learns that different types of animals live in different types of climate.

57. The statement "The child is his own best norm" suggests that
    a. no dependency should be placed upon the findings of normative studies.
    b. each individual's pattern of growth is unique because of his hereditary pattern and the environment in which he lives.
    c. by studying the child's rate of growth in the various aspects of his behavior we can discover what is normal for him.
    d. the child knows his own capabilities in intellectual, social, emotional, and physical growth.

58. "Birth is an incident in development." This statement is best explained by which one of the following items?
    a. conditions surrounding birth set the stage for future development.
    b. the physiological development of the child will continue after birth.
    c. the birth process itself is of little significance in development.

59. In the film "The Terrible Twos and Trusting Threes" the twos are facetiously identified as "terrible" because the twos
    a. have just begun to explore their environment.
    b. have discovered that there are numerous interesting things to occupy their attention.
    c. are mainly ego-centered.
    d. do not yet know how to play with others.

60. The emergence of new patterns of behavior in the process of development can best be explained by which of the statements that follow?
    a. all growth is based upon previous growth.
    b. the old is discarded for the new.
    c. growth is an unfolding process.
    d. the individual adopts that behavior which best suits his purposes.

61. Which theory of handedness is most commonly accepted today?
    a. the cerebral dominance theory
    b. the tonic neck reflex theory.

c. the genetic predisposition theory.
d. the cultural or social pressure theory.
e. none of the above.

62. A child's success in acquiring some basic musical appreciation and skill depends upon his ability to
a. learn the various patterns of musical notation.
b. recognize the underlying melody of a composition.
c. sense the beat and the rhythm of a composition.
d. hear and discriminate between differing tonal, rhythmic and sequential patterns of a composition.

63. Play is considered a very important part of the five-year-olds' curriculum because children of this age level
a. need much physical activity.
b. are trying to understand their environment.
c. are not ready for formal instruction.
d. like to imitate others.

64. Which of the following will have the greatest influence on the young child's language development?
a. his father's occupation.
b. his playmates.
c. his family.
d. the school.

65. Grouping and re-grouping children for various learning activities and providing them with instructional materials of differing levels of difficulty is a common practice in schools today because
a. children learn better when there is variety in procedures and materials.
b. children mature at different rates in the various aspects of their development.
c. the rate of maturation differs both within children and between children.
d. children are more at ease in small groups.

66. Before introducing a new learning experience a teacher often gives the children a test on both the material which has been covered previously and the new concepts which she intends to teach. The purpose of this is to
a. assess the degree to which each child has mastered the material covered.
b. provide a basis for reporting the child's progress to his parents.
c. assess each child's readiness for the next activity.
d. let each child know exactly where he stands in relation to the rest of the class.

67. When a teacher develops arithmetic problems around the children's interests and needs she has uppermost in her mind which one of the following learning principles?
a. the child learns to do by doing.
b. the child learns that which he perceives as important to learn.

c. the child learns that which is rewarded.
d. learning is multidimensional.

68. Today's classrooms are equipped with many kinds of audio-visual instructional aids because
    a. it is important to keep children from becoming bored in school.
    b. such instructional aids make learning more attractive.
    c. such instructional aids provide a concrete basis for the development of abstract concepts.
    d. such instructional aids take much of the work load off the teacher's shoulders.

69. Possibly one of the best ways to gain insight into a child's personality development is to
    a. give him a standardized personality test.
    b. have a conference with his parents and former teachers.
    c. observe his behavior in group projects.
    d. make a study of his play, recreation, and hobby activities.
    e. notice the children with whom he associates.

70. When a counselor gathers material which will give her insight into the history of a child's total growth and development, she is probably trying to determine whether or not
    a. he should be promoted to the next grade.
    b. he is working up to his potential.
    c. his maturational pattern will give a clue to the kind of instructional program he needs.

71. Children who have many rich and varied experiences will, in general, make good growth in
    a. intellectual differentiation and integration.
    b. knowledge of the world about them.
    c. ability to use language well.
    d. the development of perceptual skills.

72. According to Havighurst's concept of "developmental tasks," if an individual fails to successfully complete a task at the time it emerges in his development he will
    a. fail to learn the task.
    b. experience partial or complete failure in later tasks.
    c. lose his motivation for learning.
    d. become "fixated" at an immature level.

73. In the controversy over "nature versus nurture" which of the following positions is more commonly accepted today?
    a. environment is very important in shaping the child's personality but is limited by the child's genetic inheritance.
    b. the social and cultural environment in which the child lives plays the greater role in shaping his personality.
    c. both herdity and environment share equally in the development of the child's personality.

d. the child's inherited nature is the most important factor in shaping his personality.

74. If a baby, who seems to be making normal progress in general, fails to coo and gurgle and experiment with sounds it is possible that he may have
a. some hearing defect.
b. insufficient environmental stimulation.
c. his needs satisfied too quickly.
d. all of the above.
e. none of the above.

75. Of the following examples of four-year-old behavior which one might be considered most serious?
a. crying when he meets frustration.
b. aggressive acts to get the toys he wants.
c. consistent choice of solitary play.
d. use of terms such as "you dumb dodo" in response to adults.
e. tattling.

76. When Miss Nakama notices that a five-year-old becomes restless and wanders away from her group she may consider it an indication that
a. he has poor self-concept.
b. the activity presents difficulties with which he cannot cope.
c. he is less mature than the "average" five-year-old.
d. he needs a change of pace and type of activity.

77. Robert is a student in the sixth grade who is having difficulty adjusting both socially and academically. Miss Kodama, his teacher, examines his academic record on Form 13 to get some help in trying to meet his problems. She finds the following:
10/3/51 (4th grade) Cal.Ach.Prim.Form DD
Reading G.P. 4.7 Arith. G.P. 4.3 Lang. G.P. 3.7
Total G.P. 4.3 Intel. G.P. 3.8
10/24/51 Cal. M.M. Prim. SF Raw Score 71 CA 9-2 MA 9-3 IQ 101
12/3/52 Cal. M.M. Elem. SF Raw Score 60 CA 10-3 MA 9-7 IQ 93
9/22/53 (5th grade) Cal.Ach.Elem. From DD Reading G.P. 5.0
Arith. G.P. 5.0 Lang. G.P. 5.4 Total G.P. 5.1
Comments: (Made by previous teachers in Form 13.)
5/25/51 Inattentive. Poor work habits
51-52 A problem child. Forgetful. Tries to get by.
6/8/53 R showed much improvement in behavior and has learned not to speak out of turn. He has a bad temper and is trying to control it. Likes to eat and stay up late. Is inclined to be untidy. Can do his school work but rather lazy.

She concluded that:
a. Robert is below normal in intelligence.
b. Robert is below average in language ability.
c. Robert is about a year behind in his academic achievement.
d. Robert's academic problems may result from emotional immaturity.

78. Some second-grade children use concrete aids for learning mathematical concepts while others use them very little, if at all. This probably indicates that some children
   a. have difficulty manipulating concrete arithmetical materials.
   b. interpret the use of concrete materials as being an immature approach to the solution of problems.
   c. have had fewer quantitative experiences than others.
   d. need fewer concrete experiences prior to working with abstract numbers.

79. When children learn to roller-skate, ice-skate, swim, and surf they are exemplifying which type of growth?
   a. cephalo-caudal
   b. proximo-distal
   c. cephalo-caudal and proximo-distal

80. According to some authorities, "rebellious behavior may turn into delinquent behavior at or about age nine." The implications of this statement for parents and teachers is that
   a. rebellious behavior should be accepted and understood.
   b. the peer group becomes a source of negative influence at this time.
   c. close supervision of all the child's in and out of school activities should be provided.
   d. the child should be given freedom commensurate with his ability to use it constructively.

81. Which one of the topics listed below has received much publicity in recent years as having an important relationship to mental health?
   a. Meeting the Basic Needs of the Individual.
   b. The Development of Intelligence.
   c. The Need for a Broad Liberal Education.
   d. The Assessment and Guidance of Creativity.

82. The function of the school in America today is generally considered to be
   a. the teaching of the three R's.
   b. helping the child to realize his potential.
   c. giving the child a broad, liberal education.
   d. preparing the child to earn a living.

83. The creative individual is one who
   a. receives a very high score on an intelligence test.
   b. has talent in a special area such as art and music.
   c. uses unique problem-solving approaches in his life activities.
   d. is an over-achiever.
   e. is highly individualistic and scoffs at convention.

84. Recent research in the area of creativity has dispelled the myth that the creative individual is
   a. one who is extremely temperamental.
   b. a "beatnick" type of artist or musician.

c. a person of high intelligence
d. a rare element in our culture.

85. The eight-year-old, in his thrust for intellectual independence, exhibits
a. a resistance to teaching.
b. a negative attitude towards adults
c. a tendency to argue with others.

86. The typical eight-year-old has developed the appropriate muscle coordination necessary for success in
a. high hurdle jumping
b. quarter-mile sprinting.
c. basketball.
d. competitive swimming.
e. softball.

87. The typical eight-year-old has developed sufficient intellectual maturity to undertake a more than superficial study of
a. man and outer space.
b. early prehistoric animals.
c. American history
d. the growth of democracy.

88. The peer group assumes such importance to children of upper-elementary grades that a child who has difficulty being accepted is likely to
a. compensate by becoming the teacher's "pet."
b. resort to boasting and lying.
c. try to bribe his way by doing special favors for those whom he admires.
d. withdraw into a world of books.

89. According to normative studies children, ages nine to eleven, are generally in a period of
a. rapid physical growth.
b. irregular physical growth.
c. slow and steady growth.

90. Ten year olds are generally
a. calm and steady
b. highly excitable.
c. emotionally immature.
d. uncooperative and negative.

91. Ten-year-olds think of themselves as fairly mature and capable of making many of their own decisions. As a result they
a. resent adult assistance in any of their activities.
b. resist rules and regulations imposed by school authorities.
c. fail to seek advice or help when it is needed.
d. vacillate between dependence upon adult guidance and independent behavior.

92. The "competitive socialization" of upper elementary children is evidenced in their
  a. ritualistic procedures followed in games or club activities.
  b. their desire to be both a part of the group and yet a winner in competitive activites.
  c. the ascendancy of the competitive urge over the urge to belong to the gang.
  d. the competition for winning the coveted role as best friend of the "leader."

93. By the time a child reaches the age of ten his play interests generally become
  a. more varied and spontaneous.
  b. more selective and related to hobbies.
  c. more adventurous in nature.
  d. more limited to sedentary types of activities.

94. A teacher of the sixth grade can expect to find
  a. girls generally spurting ahead of the boys in physical growth.
  b. boys catching up with the girls in height and weight.
  c. girls dropping behind the boys in both height and weight.
  d. both boys and girls "marking time" in their physical growth.

95. The nines to elevens can be given increasing responsibility in cooperative classroom planning and procedures because they are
  a. more capable of reasoning and exchanging ideas.
  b. making a thrust for independence.
  c. better able to use language effectively.
  d. interested in impressing their peers.

96. Which one of the following books would probably have more appeal to the average ten-year-old?
  a. Horton Hatches the Egg.
  b. The Moffatts.
  c. Tom Sawyer.
  d. Mary Poppins.
  e. Homer Price.

97. When discussing the way a child feels about himself and his relationship to others we are referring to the
  a. id
  b. ego
  c. super-ego
  d. self-concept

98. One of the most important developmental tasks of later childhood is the
  a. integration of the child's out of school interests with his school activities.
  b. bringing of the child's desires into a satisfactory relationship with society's mores and customs.
  c. bringing into proper balance the relationship between the id, the ego, and the super-ego.

99. The preadolescent spurt of growth creates many problems for boys and girls because they
    a. are too immature to deal with their changing attitudes towards themselves and others.
    b. are reluctant to leave childhood behind them.
    c. find regulations and restrictions too confining.

100. When a child from a middle-class family has a very limited vocabulary a teacher may suspect that he is
    a. a slow learner
    b. mentally retarded
    c. lacking in experience background.
    d. an over-protected child.

Appendix D
Teacher Student Index of Children's Personality

			1. Cindy	2. Diane	3. Linda	4. Melva	5. Patti	6. Wanda	7. Kathy	8. Brenda	9. Karen	10. Cheryl	11. Lanny	12. David B.	13. Thomas	14. Kenn	15. Chuckie	16. Hankus	17. David Y.	18. Stevie	19. Sandy	20. John W.	21. Ronald	22. John S.	23. Pat
DEMOCRATIC BEHAVIOR		Immature																							
		Responsible																							
		Considerate																							
		Cooperative																							
WORK HABITS		Poor																							
		Average																							
		Excellent																							
ROLES ASSUMED IN GROUP		Others																							
		the secretary																							
		the caretaker																							
		the "know-it-all"																							
		the "brain"																							
		Follower																							
		Leader																							
		Popular guy																							
PERSONALITY TYPES		Relaxed																							
		Lax																							
		Shrewd																							
		Individualistic																							
		Practical																							
		Shy																							
		Persistent																							
		Serious																							
		Excitable																							
		Mature																							
		Sociable																							
PHYSICAL	Phy. Skills	Poor																							
		Average																							
		Above Average																							
		Superior																							
	Phy. Development	Advanced																							
		Retarded																							
		Awkward																							
		Well-coordinated																							
	Phy. Types	Mesomorph																							
		Endomorph																							
		Ectomorph																							

Appendix E

Semantic Differential

Name____

Sex _________ Age_________ Section _________

Date _____________ Racial Background ___________

Home Island or State__________________________

___ Sophomore ____ Junior____Senior ____Other

INSTRUCTIONS

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this inventory, please make your judgments on the basis of what these things mean to you. On each page of this booklet you will find a different concept i.e., things, ideas, objects, people to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:
If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair __x__:____:____: ____: ____: ____: ____: unfair
or
fair ____: ____:____: ____: ____: ____: __x__: unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong ____: __x__: ____: ____: ____: ____: ____: weak
or
strong ____: ____: ____: ____: ____: __x__: ____: weak

If the concept seems only slightly related to one side as opposed to the other side (but if not really neutral), then you should check as follows:

active ____: ____: __x__: ____: ____: ____: ____: passive
or
active ____: ____: ____: ____: __x__: ____: ____: passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging. If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant to the concept, then you should place your check-mark in the middle space:

safe ____: ____: ____: __x__: ____: ____: ____: dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

This Not this

____: ____: __x__: ____: ____: ____X____:

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the inventory. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the inventory. Make each item a separate and independent judgment.

Children

cold ___:___:___:___:___:___:___: hot

active ___:___:___:___:___:___:___: passive

sad ___:___:___:___:___:___:___: happy

awful ___:___:___:___:___:___:___: nice

soft ___:___:___:___:___:___:___: hard

kind ___:___:___:___:___:___:___: cruel

clean ___:___:___:___:___:___:___: dirty

fast ___:___:___:___:___:___:___: slow

strong ___:___:___:___:___:___:___: weak

calm ___:___:___:___:___:___:___: excitable

inflexable ___:___:___:___:___:___:___: adaptable

submissive ___:___:___:___:___:___:___: self-assertive

Myself With Children

cold ___:___:___:___:___:___:___: hot

active ___:___:___:___:___:___:___: passive

sad ___:___:___:___:___:___:___: happy

awful ___:___:___:___:___:___:___: nice

soft ___:___:___:___:___:___:___: hard

kind ___:___:___:___:___:___:___: cruel

clean ___:___:___:___:___:___:___: dirty

fast ___:___:___:___:___:___:___: slow

strong ___:___:___:___:___:___:___: weak

calm ___:___:___:___:___:___:___: excitable

inflexable ___:___:___:___:___:___:___: adaptable

submissive ___:___:___:___:___:___:___: self-assertive

Tape Observations
Ed. EE 220
Semester II, 1965

Directions:

1. List everything you see on the tape which would describe any child's behavior for that moment. Be specific. Do not use general statements such as "He tried to make friends." Instead, use specific descriptive statements such as "He offered some of his candy to two boys."; "He walked with a limp"; "She was not able to follow the design when cutting with scissors"; "One girl used the word 'obliterate' during the discussion.

2. List what you see in the physical environment which you feel would affect the children's attitudes towards learning.

3. List what you see in the teacher's behavior which you think would affect the children's behavior and attitude towards learning.

Table 6
Semantic Differential
Myself as a Teacher

Section DO-DO	Pre	Post	Change	Section VT-DO	Pre	Post	Change	Section VT-VT	Pre	Post	Change	Section DO-VT	Pre	Post	Change
Student				Student				Student				Student			
1	56	56	0	1	58	59	+ 1	1	61	52	- 9	1	40	40	0
2	46	45	- 1	2	61	60	- 1	2	53	56	+ 3	2	57	60	+ 3
3	48	57	+ 9	3	45	51	+ 6	3	43	45	+ 2	3	48	47	- 1
4	48	56	+ 8	4	52	55	+ 3	4	40	45	+ 5	4	54	57	+ 3
5	58	52	- 6	5	49	51	+ 2	5	48	51	+ 3	5	55	51	- 4
6	55	54	- 1	6	47	54	+ 7	6	52	50	- 2	6	49	42	- 7
7	64	63	- 1	7	53	53	0	7	54	49	- 5	7	62	56	- 6
8	63	54	- 9	8	59	52	- 7	8	60	48	-12	8	50	50	0
9	52	58	+ 6	9	53	51	- 2	9	51	48	- 3	9	61	52	- 9
10	53	60	+ 7	10	57	54	- 3	10	50	57	+ 7	10	57	53	- 3
11	63	61	- 2	11	57	61	+ 4	11	55	58	+ 3	11	64	51	-13
12	54	52	- 2	12	59	61	+ 2	12	56	59	+ 3	12	52	45	- 7
13	64	61	- 3	13	60	47	-13	13	54	48	- 6	13	53	65	+12
14	54	55	+ 1	14	49	54	+ 5	14	---	57	--	14	59	52	- 7
15	55	56	+ 1	15	58	58	0	15	50	52	+ 2	15	54	51	- 3
16	60	60	0	16	59	60	+ 1	16	49	39	-10	16	55	51	- 4
17	48	49	+ 1	17	51	50	- 1	17	48	43	0	17	60	61	+ 1
18	47	47	0	18	64	56	- 8	18	60	60	0	18	52	55	+ 3
19	63	64	+ 1	19	58	55	- 3					19	56	61	+ 1
20	--	56	--	20	50	50	0					20	60	55	- 5
21	--	63	--	21	58	54	- 4					21	53	57	+ 3
22	52	52	0	22	54	42	-12					22	61	62	+ 1
23	63	56	- 7	23	50	56	+ 6					23	61	59	- 2
24	49	56	+ 7	24	53	55	+ 2					24	37	48	+11
25	58	62	+ 4	25	63	57	- 6					25	--	--	
				26	56	42	-12								
				27	45	--	--								
Total + changes			48				39				28				41
Total - changes			32				82				47				71
Average change per person			1/2				-22				- 1				- 1

Table 7
Semantic Differentiatial
Children

Section DO-DO Student	Pre	Post	Change	Section VT-DO Student	Pre	Post	Change	Section VT-VT Student	Pre	Post	Change	Section DO-VT Student	Pre	Post	Change
1	52	51	- 1	1	42	42	0	1	58	52	- 6	1	38	40	2
2	47	41	- 6	2	54	58	+ 4	2		56	--	2	60	52	- 8
3	--	--	--	3	45	54	+ 9	3	38	44	+ 6	3	46	46	0
4	48	51	+ 3	4	53	51	- 2	4	43	46	+ 3	4	49	56	+ 7
5	50	53	+ 3	5	53	42	-11	5	48	46	- 2	5	51	49	- 2
6	44	46	+ 2	6	47	53	+ 6	6	48	51	+ 3	6	53	39	-14
7	64	58	- 6	7	49	46	- 3	7	58	45	-13	7	48	44	- 4
8	42	44	+ 2	8	55	50	- 5	8	49	47	- 2	8	54	47	- 7
9	60	54	- 6	9	51	47	- 4	9	42	45	+ 3	9	41	52	+11
10	49	63	+14	10	56	53	- 3	10	52	58	+ 6	10	49	44	- 5
11	64	62	- 2	11	47	52	+ 5	11	47	47	0	11	56	52	- 4
12	49	49	0	12	50	56	+ 6	12	47	53	+ 6	12	54	46	- 8
13	47	51	+ 4	13	46	53	+ 7	13	48	55	+ 7	13	56	63	+ 7
14	43	48	+ 5	14	53	57	+ 4	14	46	46	0	14	44	41	- 3
15	47	56	+ 9	15	54	51	- 3	15	46	48	+ 2	15	46	50	+ 4
16	49	50	+ 1	16	41	47	+ 6	16	41	44	+ 3	16	45	48	+ 3
17	42	45	+ 3	17	47	53	+ 6	17	44	49	+ 5	17	62	53	- 9
18	44	49	+ 5	18	51	54	+ 3	18	50	53	+ 3	18	52	55	+ 3
19	59	61	+ 2	19	59	48	-11					19	53	54	+ 1
20	--	56	--	20	55	50	- 5					20	45	49	+ 4
21	--	60	--	21	56	50	- 6					21	48	48	0
22	30	49	+19	22	--	46	--					22	55	66	+11
23	--	54	+ 1	23	42	43	+ 1					23	61	62	+ 1
24	43	53	+10	24	38	51	+13					24	44	43	- 1
25	51	51	0	25	55	54	- 1								
				26	50	57	+ 7								
				27	42	46	+ 4								
Total + changes			84				81				47				52
Total - changes			21				53				23				65
Average + changes per person			2.8				1				1.3				- 1/2

Guide for Observation

Intellectual Development

GROUP (Individual differences within the group are basic assumptions)

1. Does the group appear to be alert, curious, and interested in the ongoing learning experiences?
2. What variations in learning ability seem to be apparent in the group?
3. In what stage of language development does this group seem to be?
   a. Note vocabulary, length, and structure of sentences.
   b. How do they respond to activities which specifically foster growth in language ability? (See page 254 in Lane and Beauchamp)
4. What can you observe in relation to the level of development of number concepts in this group of children?
   a. How do they demonstrate their ability to apply number concepts in their daily activities, both supervised and spontaneous?
5. To what extent can children of this age deal with concepts of time and space?
6. What can you discover about the intellectual interests of the group by observing
   a. bulletin boards and displays of children's work?
   b. centers of interest?
   c. organized classroom experiences?
   d. class sharing periods such as news events and happenings both in school and outside the school?
   e. conversations at lunch and other periods during the day?

INDIVIDUAL

1. What is the child's approach to the various learning situations?
   a. Enthusiastic? Passive? Resistant?
2. Note the child's performance. Does he appear to
   a. understand the learning task?
   b. work independently?
   c. follow it through to completion?
   d. take pride in his work?
   e. have realistic standards for himself?
3. With what degree of success does he appear to meet the intellectual challenges of the daily classroom experiences?
4. What appear to be some of the intellectual interests and abilities of this child?

SUGGESTED READING

Breckinridge and Vincent, Child Development. Chaps. 9, 10, 11.
Jersild, Child Psychology. Chaps 9, 10, 11.
Martin and Stendler, Child Behavior and Development. Chaps. 15, 16
Strang, Child Study. Chaps. 14, 17.
Russel, Children's Thinking.

Ed. EE 220

Guide to Observation of Social-Emotional Development

I. Group
1. How do children interact with one another? with adults in the school situation?
    a. Is there any difference in the way boys and girls attempt to relate to others?
    b. Do the two sexes mix well? Do they react differently to each other in different activities?
2. What seem to be the requirements for acceptance by members of the group?
3. What qualities seem to typify the leaders? the followers?
    a. Do the leaders and the followers maintain these rules throughout the observation period or do they change roles? If so, what qualities seem to be related to the change?
4. What indications can you observe of confidence and adequacy in social self-concepts? Of inadequacy?
5. What opportunities exist in the classrooms for children to relate to others, to develop social skills, and to achieve satisfaction as social beings?
6. What is the general emotional climate in the classroom? Are the children friendly, happy, relaxed?
    a. Are there signs of emotional stability? Can the group take disappointments? changes of schedule? limits or restrictions on their freedom?
    b. Can the children accept suggestion and put it into practice?
    c. Are there signs of cooperation, acceptance of responsibility, follow-through to completion?
    d. Are there signs of anxiety, fear, hostility?
7. How does the group react to observers and other visitors?
    a. Do they show off?
    b. Do they accept others matter-of-factly?
8. Are there instances in which the children express happiness, excitement, love, sulkiness, dependency, annoyance, etc.?

9. What differences do you notice in the ways individuals express feelings of emotion?
10. What evidence do you see of children striving to satisfy their basic needs for love, belonging, achievement, etc.?

II. Selected Individuals
1. Does this child seem to be socially and emotionally mature according to the normal expectancy for this age level? How does he handle his emotions?
2. How does he attempt to establish friendly relationships with others?
    a. Is he friendly towards all his peers or does he tend to confine his friendships to a selected few? How exclusive are his friendships?

    b. What types of children does he seem to prefer as friends?
    c. How does he relate to adults?
3. Does he show any signs of anxiety, fear, hostility? If so, in what types of situations?
4. How does he react to stress, to frustrations?
5. Does he seem to conceive of himself as a leader or as a follower?
6. Does he seem shy, friendly, outgoing, aggressive, or withdrawing in behavior?
7. Does he show moments of dependency? of independence? In what types of situations does he exhibit each?
8. Is he overly serious or does he seem to have a sense of humor?
9. How does he respond to overture of friendship from his peers, his teacher, others?
10. Are there evidences in his behavior of feelings of shame, guilt, pride? If so, what type of situation brought this about? How did he handle such feelings?

Suggested Readings

D'Evelyn, Katherine. Meeting Children's Emotional Needs.
Havighurst, Robert J. Developmental Tasks and Education.
Hymes, James. A Child Development Point of View.
" " . Behavior and Misbehavior.
Murphy, Lois. Personality in Young Children.
Redl, Fritz. Children Who Hate.
Josselyn, Irene. The Happy Child.
Cunningham, Ruth. Understanding Group Behavior of Boys and Girls.

Ed. EE 220

Guide to Observation of Physical Development in Preschool and Elementary Children

I. Group
   1. Look for variations in: height, weight, bodily proportions, hearing, vision, and activity level.
      a. Are there problems of obesity?
      b. Are there any signs of undernourishment in some individuals?
      c. Are there any with observable handicaps such as a limp, skin disorders, or epilespy?
      d. Do any seem to tire easily and are ther others who seem to have boundless energy?
   2. Observe activities in which children are engaged, i.e., writing, art, games, folk-dancing, etc., and note the degree of motor skill which the children display as a group in general and as individuals.
      a. Which of these activities offer opportunities for developing and/or refining both large and small muscle coordination?
   3. What spontaneous (free choice) activities do you observe and what do these indicate to you about the physical development of this group as a whole?

II. Selected Individuals (Select two children for observation throughout each five-week period)
   1. What are his physical characteristics as compared with the group?
      a. How would you describe his body build? his general appearance?
      b. What evidences do you see of his strength? his speed? his enthusiasm and drive? his fatique level? (how soon does he show signs of becoming tired?)
      c. Does he show signs of satisfaction from physical exertion? How?
   2. Does he have any noticeable physical handicap?
   3. What physical skills does he seem to be in the process of developing or refining?
   4. What seem to be his spontaneous play interests?

Suggested Readings

Martin and Stendler, Child Behavior and Development, Ch. XIV.
Almy, Millie, Child Development.
Breckenridge and Vicent, Child Development.
Jersild, Arthur, Child Psychology, Ch. V.
Olson, Willard, How Children Grow and Develop.

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Donner, Stanley T., "Television in Teacher Training," *CETO News*, No. 6, Centre for Educational Television Overseas, The Studio, Nuffield Lodge, Regent's Park, London, N. W., England: March, 1965, pp.5-8.

Doverspike, James, "Utilization of Closed Circuit Television in the Guidance Laboratory," University of Akron, Ohio. *New Media in Higher Education*, Association for Higher Education, National Education Association, Washington, D. C.: 1963, pp. 50-51.

Fulton, W. R., "Observation of Teaching: Direct vs. Vicarious Experience," University of Oklahoma, Norman, *New Media in Higher Education*, Association for Higher Education, National Education Association, Washington, D. C.: 1963, pp. 78-79.

Porter, Rutherford B. and Raymond B. Cattell, *Handbook for the IPAT Children's Personality Questionnaire, The CPQ*," *Forms A and B*, Institute for Personality and Ability Testing, Champaign, Illinois: 1960, pp. 5-6.

Rogers, William R. (and staff of Division of Education and Audiovisual Services), "Television Utilization in the Observation Program for Teacher Education," (1959-1962) San Jose State College, U.S.O.E. N.D.E.A. (Title VII) Grant, 1961.

Ruhe, D. S., "Medical Education and Television 1960--A Perspective on Advances in the United States," *Research Film* 4: 13-24; No. 1, 1960.

Springel, Nona F., "The Semantic Differential and Its Use," A Paper Submitted to the Graduate Faculty of the University of Hawaii in Partial Fulfillment of the Requirements for the degree, Master of Education in Educational Psychology, University of Hawaii, Honolulu, Hawaii: 1964, p. 16.

Stoller, Nathan and Lesser, Gerald S., "A Comparison of Methods of Observation in Pre-Service Teacher Training, Phase II," Hunter College of the City University of New York, New York, New York, 1963.